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# Guide to the Wild Germplasm of Brassica and Allied Crops

Part I

Centre for Land and Biological Resources Research



Centre de recherches sur les terres et les ressources biologiques

Canadä<sup>\*</sup>

#### Cover illustration

The images represent the Research Branch's objective: to improve the long-term competitiveness of the Canadian agri-food sector through the development and transfer of new technologies.

Designed by Research Program Service.

#### Illustration de la couverture

Les dessins illustrent l'objectif de la Direction générale de la recherche : améliorer la compétitivité à long terme du secteur agro-alimentaire canadien grâce à la mise au point et au transfert de nouvelles technologies.

Conception par le Service aux programmes de recherches.



## Guide to the Wild Germplasm of Brassica and Allied Crops

Part I Taxonomy and Genome Status in the Tribe Brassiceae (Cruciferae)

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#### INTRODUCTION TO THE GUIDE:

The Cruciferae family, which contains about 3500 species and 350 genera, is one of the ten most economically important plant families (Rich 1991). The tribe Brassiceae is one of the 13-19 tribes which have been recognized within the family and is one of the few tribes believed to constitute a natural group (Hedge 1976, Al-Shehbaz 1984, 1985). It is the most important economically and the most distinctive (Gómez-Campo 1980, Al-Shehbaz 1985). It is distinguished on the basis of the presence of conduplicate cotyledons (i.e. the cotyledons are longitudinally folded around the radical) and/or two-segmented fruits (siliques) which contain seeds in one or both segments, and only simple hairs if present (Gómez-Campo 1980, Al-Shehbaz 1985).

Crop brassicas display enormous diversity and are used as a source of oil, vegetables, mustard condiments, and fodder. Those of particular importance in Canada are: Brassica napus, B. rapa, and B. juncea as sources of canola oil, and B. oleracea as colecrops. The genera Raphanus and Sinapis are also of major importance, the former cultivated for its edible roots and the latter as a source of mustard condiments along with B. nigra. Several species have become naturalized weeds in Canada and the United States [eg. Sinapis arvensis (wild mustard), Raphanus raphanistrum (wild radish), and B. rapa (wild rape)], representing both a potential source of germplasm and agricultural problems. In other areas of the world Crambe is cultivated as an industrial oil, and the leaves of other genera (eg. Eruca and Diplotaxis) are eaten as salad greens.

An understanding of the genetic potential of wild relatives of the crop species of Brassica and allied genera (members of the Tribe Brassiceae) is critical for the establishment of long-term breeding programs of these crops. In addition, it is clear that many of the wild species in the tribe have potential value as new crops, as sources of industrial oils (Crambe, Eruca), condiments ( $Sinapis\ alba$ ), and other diverse products. Wild relatives also possess a number of useful agronomic traits which could be incorporated into breeding programs, including: cytoplasmic and nuclear male sterility; resistance to disease and insect and nematode pests; intermediate  $C_3-C_4$  photosynthetic activity; and tolerance of cold, salt and drought conditions.

The last comprehensive taxonomic treatment on the tribe was conducted by Schulz (1919, 1923, 1936). The tribe Brassiceae contains approximately 217 species and 51 genera, 25 of which are monotypic (Table below). Geographically, it is centered in the southwestern Mediterranean region, particularly Algeria, Morocco and Spain, where c. 41 genera are either endemic or exhibit maximum diversity. The tribal range extends eastward into India and Pakistan and southward into South Africa, with a poor representation in the New World (Hedge 1976, Gómez-Campo 1980, Al-Shehbaz 1985).

#### GENERA OF THE TRIBE BRASSICEAE (no. species in brackets)

Guiraoa (1) Ammosperma (2) Hemicrambe (2) Boleum (1) Brassica (35) Henophyton (1) Hirschfeldia (2) Cakile (7) Kremeriella (1) Carrichtera (1) Ceratocnemum (1) Moricandia (9) Morisia (1) Chalcanthus (2) Muricaria (1) Coincya (6) Conringia (6) Otocarpus (1) Physorrhynchus (2) Cordylocarpus (1) Pseuderucaria (2) Crambe (26) Crambella (1) Pseudofortuynia (1) Didesmus (2) Psychine (1) Quezeliantha (1) Diplotaxis (27) Raffenaldia (2) Dolichorhynchus (1) Raphanus (2) Douepia (1) Enarthrocarpus (5) Rapistrum (2) Eremophyton (1) Rytidocarpus (1) Eruca (3) Savignya (1) Erucaria (9) Schouwia (1) Erucastrum (19) Sinapidendron (5) Sinapis (5) Euzomodendron (1) Fezia (1) Succowia (1) Foleyola (1) Trachystoma (3) Fortuynia (2) Vella (5) Zilla (1)

Within the tribe, Schulz (1919, 1923, 1936) also recognized, somewhat arbitarily on the basis of morphological characters, seven subtribes: Brassicinae, Cakilinae, Moricandiinae, Raphaninae, Savignyinae, Vellinae, and Zillinae. Gómez-Campo (1980) has since proposed a reduction to six subtribes with the inclusion of the Savignyinae in the Vellinae. The Brassicinae and Moricandiinae both include genera with elongated siliquose dehiscent fruit, while the other subtribes include those with reduced or "nucamentaceous" fruits.

Generic boundaries in the tribe are still somewhat arbitrarily drawn, and the establishment of clear-cut intergeneric relationships requires clarification. Unlike many of the small genera, the species are generally very distinct throughout the family, with fruit characters being the most reliably used structures for the proper identification of genera and species. Taxonomic debate in the tribe has centred most particularly upon the number of and relationships between the subtribes and genera (Hedge 1976, Al-Shehbaz 1985).

The genus Brassica is one of ten core genera in the subtribe Brassicinae, which also includes Coincya, Diplotaxis, Eruca, Erucastrum, Hirschfeldia, Raphanus, Sinapidendron, Sinapis, and Trachystoma. The Brassicinae is defined primarily on the basis of elongated (siliquose) dehiscent fruits, presence of median nectaries, and usually seeded beaks. Although morphologically quite distinct from subtribes Cakilinae, Vellinae, and Zillinae, its separation from the Raphaninae and Moricandiinae is less clear. Current generic circumscriptions within the subtribe Brassicinae have also been considered to be highly artificial by many taxonomists, with generic delimitation based primarily on only one or two morphological traits.

Systematists are continuing to re-evaluate relationships within the tribe Brassiceae by way of morphological, cytological, hybridization, isozyme and molecular analyses (studies reviewed in Warwick and Black 1991, 1993). Such research has confirmed many proposed species relationships, but has also indicated new relationships between genera and species. In particular, these studies have identified new potential sources of germplasm for Brassica crops, indicating that the range of germplasm important to the genus is much greater than previously recognized.

The following Guide to the wild germplasm of Brassica and allied crops (Tribe Brassiceae, family Cruciferae) will be divided into five parts as indicated below:

- I. Taxonomy and Genome Status [Complete list of genera and species in the tribe and their genomic status, containing cross references for commonly confused names]; by S.I. WARWICK
- II. Chromosome Numbers;
  by S.I. WARWICK & J.K. ANDERSON
- III. Interspecific and Intergeneric Hybridizations; by S.I. WARWICK & L.D. BLACK
- IV. Wild Species as Sources of Agronomic Traits [List of
   potentially useful agronomic traits and possible wild
   germplasm sources in the tribe];
   by S.I. WARWICK
- V. Life History Data [Summary of habitat and geographical distributions of all species indicated in part I.] by S.I. WARWICK

The information provided in this guide is intended to be useful in providing direction for future genebank needs for these crops and for assisting biotechnologists and breeders wishing to utilize these genetic resources in their research programs.

### PART I: TAXONOMY AND GENOME STATUS IN THE TRIBE BRASSICEAE (Cruciferae)

The following publication is the first part of a guide to the wild germplasm of *Brassica* and allied crops (Tribe Brassiceae, family Cruciferae). It provides a complete list of genera and species in the tribe and their genomic status.

Extensive synonymy exists for almost all the species in this tribe with different taxonomists over the last 240 years referring to the same species under different names. Taxonomic studies (revisions) have indicated which of these names correspond to the same species, i.e. are synonymous. A complete list of all latin binomials and cross references for each species in the tribe would number in the thousands. In this publication I have been selective in my synthesis of the main species in the tribe as summarized from the major floras of the world. I have tried to include only "current" names - those which appear in the recent literature and are used to describe the same taxon and which often cause confusion for all but the most dedicated taxonomist. Such an example would be Brassica adpressa and Hirschfeldia incana, both commonly used names for the same species in North America and Europe, respectively. This taxonomic guide will include both names and will indicate under which name the biological information in the subsequent parts will appear.

The following information is provided for each taxon:

GENUS & Latin binomial for each taxon followed by the name of the taxonomic authority.

AUTH SOURCE: Reference in which authority published the binomial

name, i.e source of species description.

SUBSPECIES: List of currently recognized subspecies for each

species, followed by the name of the authority that recognized the taxon at the subspecific rank followed by the published reference for this name.

SYNONYM: As required, the current latin binomial with which

this species name is synonymous.

GENOME: The cytodeme status of this particular taxon. In

many cases this is identical to the species name, but in other cases studies have indicated that the taxon is highly interfertile with other taxa (See GENOME STATUS) and included in the same "cytodeme".

Information is available in the publication under this name or under the synonym.

The final statement indicates whether additional biological information will be summarized in the subsequent parts of the guide under the particular latin binomial cited in **GENUS & SPECIES** or that under the **SYNONYM**. Biological information will be summarized for each species and will not usually be given separately for subspecies and varieties.

Ammosperma GENOME: Ammosperma cinereum GENUS:

SPECIES: cinereum (Desf.) Hook. f.
AUTH SOURCE: Benth. and Hook., Gen. Pl. 1:82 (1862) Information is available in the Guide under this name.

Ammosperma GENOME: Ammosperma variabile GENUS:

SPECIES: variabile Nègre & Le Houérou AUTH SOURCE: Bull. Soc. Bot. Fr. 106:146 (1959)

Information is available in the Guide under this name.

**GENOME:** Boleum asperum GENUS: Boleum

SPECIES: asperum (Pers.) Desv.
AUTH SOURCE: J. Bot. Agric. 3:163 (1815)

SYNONYM: <u>Vella aspera</u> Pers., Syn. Pl. 2:185 (1806) Information is available in the Guide under this name.

SPECIES: GENOME: Hirschfeldia incana

adpressa Boiss.

AUTH SOURCE: Voy. Bot. Midi Espagne II (1839) SYNONYM: <u>Hirschfeldia incana</u> (L.) Lagrèze-Fossat Information is available in the Guide under the synonym.

GENUS: Brassica GENOME: Brassica oleracea

SPECIES: alboglabra L.H. Bailey AUTH SOURCE: Gentes Herb. 1:79 (1922)

SYNONYM: Brassica oleracea L.
Information is available in the Guide under the synonym.

GENUS: Brassica GENOME: Brassica souliei

amplexicaulis (Desf.) Pomel SPECIES:

AUTH SOURCE: Mat. Fl. Atlant. :15 (1860)

SYNONYM: <u>Brassica souliei</u> ssp. <u>amplexicaulis</u> (Desf.) Greuter & Burdet

Information is available in the Guide under the synonym.

GENOME: Brassica assyriaca Brassica

SPECIES: assyriaca Mouton

AUTH SOURCE: Nouv. Fl. Liban Syrie 2:113 (1970) Information is available in the Guide under this name.

SPECIES: atlanta GENOME: Brassica oleracea

SPECIES: atlantica (Coss.) O.E. Schulz
AUTH SOURCE: Engler, Pflanzenr. IV 105 (Heft 68-70):36 (1919)

Brassica insularis Moris

Information is available in the Guide under this name.

GENUS: Brassica **GENOME:** Brassica balearica

SPECIES: balearica Pers.

AUTH SOURCE: Syn. Pl. 2:206 (1806)

Information is available in the Guide under this name.

GENOME: Brassica barrelieri Brassica

SPECIES: <u>barrelieri</u> (L.) Janka AUTH SOURCE: Term., Füz. 6:179 (1882) Information is available in the Guide under this name.

GENOME: Brassica oleracea GENUS: Brassica

SPECIES: bourgeaui (Webb) Kuntze
AUTH SOURCE: Rev. Gen. Pl. 1:20 (1891)

Information is available in the Guide under this name.

GENUS: GENOME: Brassica cadmea

Brassica cadmea Heldr. ex O.E. Schulz SPECIES:

AUTH SOURCE: Engler, Pflanzenr. IV 105 (Heft 68-70):63 (1919) Information is available in the Guide under this name.

GENUS: Brassica GENOME: Brassica rapa

SPECIES: SPECIES: campestris L.
AUTH SOURCE: Sp. Pl. 666 (1753) SYNONYM: Brassica rapa L.

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GENOME: Brassica carinata
               Brassica
               carinata A. Braun
SPECIES:
AUTH SOURCE: Flora (Regensb.) 24:267 (1842)
Information is available in the Guide under this name.
                                                                      GENOME: Brassica juncea
             Brassica
SPECIES: cernua (Thunb.) Forbes & Hemsley
AUTH SOURCE: J. Linn. Soc. 23:47 (1886)
                          juncea (L.) Czern. & Coss.
SYNONYH:
               Brassica
Information is available in the Guide under the synonym.
GENUS:
                                                                      GENOME: Brassica rapa
               Brassica
SPECIES:
               chinensis L.
AUTH SOURCE: Cent. I. Pl., p. 19 (1755)
SYNONYM:
               Brassica rapa L.
Information is available in the Guide under the synonym.
                                                                      GENOME: Brassica fruticulosa
GENUS:
              Brassica
               cossoniana Boiss. & Reut.
SPECIES:
AUTH SOURCE: Boiss., Diagn. Pl. Orient. Nov. ser. 2, 1:31 (1854)
SYNONYM: <u>Brassica fruticulosa</u> ssp. <u>cossoniana</u> (Boiss. & Reut.) Maire Information is available in the Guide under the synonym.
                                                                      GENOME: Brassica oleracea
GENUS:
              Brassica
SPECIES:
               cretica Lam.
AUTH SOURCE: Encycl. Méth. Bot. 1:747 (1785)
                        ssp. aegaea (Heldr. & Hal.) Snogerup, M. Gustafsson & Bothmer: Snogerup et al., Willdenowia
SUBSPECIES:
                              19:289 (1990);
                        ssp. cretica;
                        ssp. <u>laconica</u> M. Gustafsson & Snogerup, Bot. Chron. 3:8 (1984)
               Brassica oleracea var. cretica (Lam.) Coss.
Information is available in the Guide under this name.
GENUS:
                                                                     GENOME: Brassica deflexa
             Brassica
SPECIES:
               <u>deflexa</u> Boiss.
AUTH SOURCE: Ann. Sci. Nat. Bot., ser. 2, 17:87 (1842)
SUBSPECIES: ssp. deflexa; ssp. leptocarpa (Boiss.) Hedge: Rech. f., Fl. Iranica 57:35 (1968) Information is available in the Guide under this name.
                                                                     GENOME: Brassica deserti
GENUS:
               Brassica
SPECIES:
               deserti Danin & Hedge
AUTH SOURCE: Not. Roy. Bot. Gard. Edinb. 32:259, f. 1 (1972)
Information is available in the Guide under this name.
GENUS:
               Brassica
                                                                      GENOME: Brassica repanda
SPECIES: desnottesii Emb. & Maire
AUTH SOURCE: Pl. Marocc. Nov. 2:1 (1929)
Information is available in the Guide under this name.
               Brassica
GENUS:
                                                                     GENOME: Brassica souliei
               dimorpha Coss. & Durieu
SPECIES-
AUTH SOURCE: Bull. Soc. Bot. Fr. 2:306 (1855)
SYNONYM: <u>Brassica souliei</u> ssp. "<u>dimorpha"</u> (Coss. & Durieu) Salmeen, Eunpublished Ph.D. thesis 1979] Information is available in the Guide under the synonym.
GENUS:
               Brassica
                                                                     GENOME: Brassica oleracea
SPECIES:
               drepanensis (Caruel) Damanti
AUTH SOURCE: Nat. Sicil. 10(4):91 (1891)
SYNONYM: Brassica villosa Biv.
Information is available in the Guide under the synonym.
GENUS:
               Brassica
                                                                     GENOME: Brassica elongata
SPECIES:
               elongata Ehrh.
AUTH SOURCE: Beitr. Naturk. 7:159 (1792)
SUBSPECIES:
                       ssp. elongata;
ssp. imdrhasiana Quézel, Bull. Soc. Sci. Nat. Maroc 34:304 (1955);
                       ssp. integrifolia (Boiss.) Breistr., Not. Syst. Bot.:13 (1942);
ssp. pinnatifida (Schmalh.) Greuter & Burdet, Willdenowia 15:64 (1985);
ssp. subscaposa (Maire & Weiller) Maire, Fl. Afr. Nord 12:168 (1965)
Information is available in the Guide under this name.
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GENUS:
               Brassica
                                                                    GENOME: Brassica fruticulosa
SPECIES:
               fruticulosa Cyr.
AUTH SOURCE: Pl. Rar. Neap. 2:7 (1792)
                       ssp. cossoniana (Boiss. & Reut.) Maire: Jahandiez & Maire, Cat. Pl. Maroc 2: 287 (1932); ssp. fruticulosa;
SUBSPECIES:
                       ssp. glaberrima (Pomel) Batt.: Batt. & Trabut, Fl. Algérie 1:59 (1888);
                       ssp. mauritanica (Coss.) Maire: Jahandiez & Maire, Cat. Pl. Maroc 2:288 (1932); ssp. numidica (Coss.) Maire, Fl. Afr. Nord 12:175 (1965);
                       ssp. pomeliana Maire, Willdenowia 15:64 (1985);
ssp. radicata (Desf.) Batt.: Batt. & Trabut, Fl. Algérie 1:59 (1888);
ssp. rifana (Emb. & Maire) Maire: Jahandiez & Maire, Cat. Pl. Maroc 2:288 (1932)
Information is available in the Guide under this name.
GENUS:
                                                                    GENOME: Brassica glabrescens
              Brassica
SPECIES: qlabrescens Poldini
AUTH SOURCE: Giorn. Bot. Ital. 107:181 (1973)
Information is available in the Guide under this name.
GENUS:
                                                                    GENOME: Brassica gravinae
              Brassica
SPECIES: gravinae Ten.
AUTH SOURCE: Fl. Napol. 1:39 (1811)
Information is available in the Guide under this name.
                                                                    GENOME: Brassica oleracea
GENUS:
               Brassica |
SPECIES:
               <u>hilarionis</u> Post
AUTH SOURCE: Mém. Herb. Boissier 18:90 (1900)
Information is available in the Guide under this name.
GENUS:
                                                                    GENOME: Sinapis alba-flexuosa
               Brassica
SPECIES: hirta Moench
AUTH SOURCE: Suppl. Meth. :84, 2 (1802)
SYNONYM: Sinapis alba L.

Information is available in the Guide under the synonym.
                                                                    GENOME: Brassica oleracea
               Brassica
SPECIES:
               incana Ten.
AUTH SOURCE: Fl. Napol. 1:39 (1811)
              Brassica oleracea L. var. incana (Ten.) Paol.: Fiori & Paol., Fl. Italia 1:446 (1898)
SYNONYM:
Information is available in the Guide under this name.
GENUS:
               Brassica
                                                                    GENOME: Brassica oleracea
SPECIES:
               insularis Moris
AUTH SOURCE: Fl. Sardoa 1:168 (1837)
SYNONYM:
              Brassica oleracea ssp. insularis (Moris) Rouy & Fouc., Fl. France 2:54 (1895)
Information is available in the Guide under this name.
GENUS:
               Brassica
                                                                    GENOME: Brassica juncea
SPECIES: integrifolia (West) O.E. Schulz
AUTH SOURCE: Urban, Symb. Antill. 3,3:509 (1903)
              Brassica juncea (L.) Czern. & Coss.
SYNONYH:
Information is available in the Guide under the synonym.
GENUS:
               Brassica
                                                                    GENOME: Brassica deflexa
SPECIES: iranica Rech. f., Aell. & Esfand.
AUTH SOURCE: Phyton 3:44 (1951)
SYNONYH:
               Brassica deflexa ssp. leptocarpa (Boiss.) Hedge
Information is available in the Guide under the synonym.
GENUS:
                                                                    GENOME: Brassica juncea
               Brassica
SPECIES:
               japonica (Thunb.) Siebold ex Miq.
AUTH SOURCE: Ann. Mus. Bot. Lugdono-Batavum 2:74 (1865)
              Brassica juncea (L.) Czern. & Coss.
Information is available in the Guide under the synonym.
GENUS:
               Brassica
                                                                    GENOME: Brassica jordanoffii
SPECIES:
               jordanoffii O.E. Schulz
AUTH SOURCE: Notizbl. Bot. Gart. Berlin-Dahlem 10:111 (1927)
Information is available in the Guide under this name.
GENUS:
                                                                    GENOME: Brassica juncea
               Brassica
SPECIES:
               juncea (L.) Czern. & Coss.
AUTH SOURCE: Czern., Consp. Pl. Charc. 8 (1859)
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**GENOME:** Sinapis arvensis Brassica

kaber (DC.) Wheeler SPECIES: AUTH SOURCE: Rhodora 40:306 (1938) SYNONYH: Sinapis arvensis L.

Information is available in the Guide under the synonym.

GENOME: Brassica deflexa GENUS: Brassica

SPECIES: <u>leptocarpa</u> Boiss.

AUTH SOURCE: Fl. Orient. 1:392 (1867)

Brassica deflexa ssp. leptocarpa (Boiss.) Hedge SYNONYN: Information is available in the Guide under the synonym.

GENOME: Brassica oleracea Brassica

SPECIES: macrocarpa Guss.

AUTH SOURCE: Ind. Sem. Hort. Boccadi. 3 (1825)

Information is available in the Guide under this name.

GENUS: GENOME: Brassica fruticulosa Brassica

SPECIES: maurorum Durieu

AUTH SOURCE: Rev. Bot. Bull. Mens. 2:433 (1847)

Information is available in the Guide under this name.

GENUS: Brassica GENOME: Brassica oleracea

SPECIES: montana Pourret
AUTH SOURCE: Hist. Mém. Acad. Roy. Sci. Toulouse 1, ser. 3:308 (1778)

Information is available in the Guide under this name.

GENUS: Brassica GENOME: Brassica napus

SPECIES: napus L.

AUTH SOURCE: Sp. Pl. :666 (1753)

SYNONYH: Brassica rapa ssp. napus (L.) Briq.

Information is available in the Guide under this name.

GENUS: Brassica GENOME: Brassica nigra

nigra (L.) Koch SPECIES:

AUTH SOURCE: Röhl., Deutschl. Fl. ed. 3, 4:713 (1833) Information is available in the Guide under this name.

GENUS: GENOME: Brassica nivalis Brassica

nivalis Boiss. & Heldr. SPECIES:

AUTH SOURCE: Boiss., Diagn. Pl. Orient. Nov. ser. 2, 1:32 (1853) Information is available in the Guide under this name.

GENUS: Brassica GENOME: Brassica oleracea

SPECIES: nivea Boiss. & Spruner

AUTH SOURCE: Boiss. Diagn. Pl. Orient. Nov. ser. 1, 1:72 (1843)

Brassica cretica ssp. cretica Lam. SYNONYH:

Information is available in the Guide under the synonym.

Brassica GENOME: Brassica repanda

SPECIES: nudicaulis (Lag.) O.E. Schulz
AUTH SOURCE: Engler, Pflanzenr. IV. 105 (Heft 68-70):72 (1919) Brassica repanda ssp. nudicaulis (Lag.) Heywood Information is available in the Guide under the synonym.

GENUS: Brassica GENOME: Brassica oleracea

SPECIES: oleracea L

AUTH SOURCE: Sp. Pl. :667 (1753) ssp. <u>"alboglabra"</u>; SUBSPECIES:

ssp. oleracea; ssp. sylvestris (L.) DC., Prodr. 1:213 (1834)

Information is available in the Guide under this name.

GENUS: Brassica GENOME: Brassica oxyrrhina

SPECIES: Oxyrrhina (Coss.) Willk. & Lange AUTH SOURCE: Prodr. Fl. Hispan. 3:854 (1880)

Information is available in the Guide under this name.

GENUS: GENOME: Brassica rapa Brassica

SPECIES: pekinensis (Lour.) Rupr. AUTH SOURCE: Fl. Ingrica 1:96 (1860) SYNONYH: Brassica rapa L.

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GENOME: Brassica procumbens
GENUS:
              <u>Brassica</u>
SPECIES: procumbens (Poiret) O.E. Schulz
AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):55 (1916)
Information is available in the Guide under this name.
         Brassica
GENUS:
                                                                 GENOME: Brassica rapa
SPECIES:
               rapa L.
AUTH SOURCE: Sp. Pl. :666 (1753)
                      ssp. rapa;
SUBSPECIES:
                      ssp. sylvestris (L.) Janchen: Janchen & Wendelberger, Kleine Fl. Wein :55 (1953)
SYNONYH:
              Brassica campestris L.
Information is available in the Guide under this name.
GENUS:
                                                                 GENOME: Brassica repanda
              Brassica
              repanda (Willd.) DC.
SPECIES:
AUTH SOURCE: Reg. Veg. Syst. Nat. 2:598 (1821)
                      ssp. africana (Maire) Greuter & Burdet, Willdenowia 13:86 (1983), [includes
SUBSPECIES:
                            ssp. nudicaulis];
                      ssp. almeriensis Gómez-Campo, Anales Inst. Bot. Cavanilles 33:154 (1976);
                      ssp. blancoana (Boiss.) Heywood, Feddes Repert. 66:153 (1962);
ssp. cadevallii (Font Quer) Heywood, Feddes Repert. 66:154 (1962);
ssp. cantabrica (Font Quer) Heywood, Feddes Repert. 69:151 (1964);
                      ssp. confusa (Emb. & Maire) Heywood, Feddes Repert. 66:153 (1962);
                      ssp. <u>galissieri</u> (Giraud.) Heywood, Feddes Repert. 69:150 (1964);
ssp. <u>latisiliqua</u> (Boiss. & Reut.) Heywood, Feddes Repert. 66:153 (1962);
                      ssp. maritima (Rouy) Heywood, Feddes Repert. 66:153 (1962);
                      ssp. nudicaulis (Lag.) Heywood, Feddes Repert. 69:151 (1964), [included in ssp. africana
                            Greuter et al. (1986)];
                      ssp. repanda;
                      ssp. saxatilis (DC.) Heywood, Feddes Repert. 69:151 (1964);
                      ssp. silenifolia (Emb.) Greuter & Burdet, Willdenowia 13:86 (1983);
                      ssp. turbonis (P. Monts.) J. Monts & Romo, Willdenowia 15:64 (1985)
Information is available in the Guide under this name.
GENUS:
              Brassica
                                                                 GENOME: Brassica fruticulosa
SPECIES.
              rifana Emb. & Maire
AUTH SOURCE: Mém. Soc. Sci. Nat. Maroc, 17:26 (1927)
              Brassica fruticulosa ssp. rifana (Emb. & Maire) Maire
              [= Erucastrum rifanum (Emb. & Maire) Gómez-Campo]
Information is available in the Guide under the synonym.
GENUS:
                                                                 GENOME: Brassica oleracea
              Brassica
SPECIES.
              robertiana J. Gay
AUTH SOURCE: Monnard, Ann. Sci. Nat. (Paris) 7:415 (1826)
SYNONYM:
              Brassica montana Pourret
Information is available in the Guide under the synonym.
GENUS:
              Brassica
                                                                 GENOME: Brassica oleracea
              rupestris Raf.
SPECIES:
AUTH SOURCE: Caratt. Nuov. Gen. :77 (1810)
SYNONYN:
              Brassica oleracea L. rupestris Paol.: Fiori & Paol., Fl. Italia I,2:446 (1898)
Information is available in the Guide under this name.
GENUS:
              Brassica
                                                                 GENOME: Brassica oleracea
SPECIES:
              rupicola Bouloumoy
AUTH SOURCE: Fl. Liban Syrie: 27 (1930)
SYNONYH:
              Brassica cretica ssp. cretica Lam.
Information is available in the Guide under the synonym.
GENUS:
              Brassica
                                                                 GENOME: Brassica repanda
              saxatilis DC. ex Amo
SPECIES:
AUTH SOURCE: Amo, Mém. Real. Acad. Ci. Exact. Madrid 5:233 (1861)
SYNONYM: <u>Brassica repanda</u> ssp. <u>saxatilis</u> (DC.) Heywood Information is available in the Guide under the synonym.
GENUS:
              Brassica
                                                                 GENOME: Brassica fruticulosa
SPECIES:
              scopulorum Coss. & Durieu
AUTH SOURCE: Coss. & Barratte, Ill. Fl. Atlant. 1:28 (1882) [nom. illeg.]
SYNONYM:
              Brassica spinescens Pomel
Information is available in the Guide under the synonym.
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GENOME: Brassica souliei **GENUS:** Brassica

SPECIES: souliei (Batt.) Batt.

AUTH SOURCE: Bull. Soc. Bot. Fr. 40:262 (1893)

ssp. <u>amplexicaulis</u> (Desf.) Greuter & Burdet, Willdenowia 13:86 (1983); ssp. <u>"dimorpha"</u> (Coss. & Durieu) Salmeen, [unpublished Ph.D. thesis 1979]; SUBSPECIES:

ssp. <u>souliei</u>

Information is available in the Guide under this name.

GENOME: Brassica fruticulosa SENUS: Brassica

SPECIES: Spinescens Pomel
AUTH SOURCE: Nouv. Mat. Fl. Atlant.:364 (1875)

Information is available in the Guide under this name.

GENOME: Brassica oleracea GENUS: Brassica

SPECIES: sylvestris (L.) Miller AUTH SOURCE: Gard. Dict. ed. 8 (1): (1768)

SYNONYH: Brassica oleracea L.

Information is available in the Guide under the synonym.

GENUS: GENOME: Brassica tournefortii Brassica

GENUS:

SPECIES: tournefortii Gouan
AUTH SOURCE: Ill. Observ. Bot. 44 (1773)

Information is available in the Guide under this name.

GENOME: Brassica juncea

Brassica urbaniana O.E. Schulz SPECIES:

AUTH SOURCE: Urban, Symb. Antill. 3,3:511 (1903)

SYNONYH: Brassica juncea (L.) Czern. & Coss.

Information is available in the Guide under the synonym.

GENOME: Brassica oleracea **GENUS:** Brassica

SPECIES: villosa Biv.

AUTH SOURCE: Stirp. Rar. Sicilia 4:20 (1818)
Information is available in the Guide under this name.

GENOME: Coincya

GENUS: Brassicella Fourr.
AUTH SOURCE: Annal. Soc. Linn. Lyon, N.S. 16:330 (1868)

Coincya Porta & Rigo ex Rouy SYNONYM:

Information is available in the Guide under the synonym.

**GENOME:** Cakile maritima GENUS: Cakile

SPECIES: aegyptica (L.) Pignatti

AUTH SOURCE: Atti Inst. Bot. Univ. Pav. ser. 5,12:149 (1956)

SYNONYM: <u>Cakile maritima</u> Scop.

Information is available in the Guide under the synonym.

**GENOME:** Cakile maritima

SPECIES: Cakile SPECIES: aeqytiaca Willd.
AUTH SOURCE: Sp. Pl. 3:417 (1800) Cakile maritima Scop. SYNONYM:

Information is available in the Guide under the synonym.

GENUS: Cakile GENOME: Cakile arabica

SPECIES: <u>arabica</u> Velen. & Bornm.

AUTH SOURCE: Repert. Spec. Nov. Regni Veg. 9:114 (1911)

Information is available in the Guide under this name.

GENUS: Cakile **GENOME:** Cakile maritima

SPECIES: arctica Pobedimova

AUTH SOURCE: Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 15:64 (1953)

Information is available in the Guide under this name.

GENUS: Cakile **GENOME:** Cakile maritima

SPECIES: baltica Jordan ex Pobedimova

AUTH SOURCE: Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 15:66 (1953)

Cakile maritima ssp. baltica (Jordan ex Rouy & Foucaud) Hyl. ex P.W. Ball

Cakile **GENUS:** GENOME: Cakile maritima SPECIES: constricta Rodman AUTH SOURCE: Contrib. Gray Herbarium 205:131 (1974) Information is available in the Guide under this name. GENUS: <u>Cakile</u> **GENOME:** Cakile maritima SPECIES: edentula (Bigelow) Hook. AUTH SOURCE: Fl. Bor-Amer. 1:59 (1833) SUBSPECTES: ssp. <u>edentula</u>; ssp. harperi (Small) Rodman, Contrib. Gray Herb. 205:125 (1974); ssp. <u>islandica</u> (Gand.) A. & D. Love, Bot. Not. 114:52 (1961) Cakile maritima Scop. (North American component) SYNONYH: Information is available in the Guide under this name. Cakile **GENOME:** Cakile maritima euxina Pobedimova SPECIES: AUTH SOURCE: Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk. SSSR 15:71 (1953) SYNONYM: <u>Cakile maritima</u> ssp. <u>euxina</u> (Pobedimova) E. I. Nyárády Information is available in the Guide under the synonym. <u>Cakile</u> <u>fusiformis</u> Greene GENUS: GENOME: Cakile maritima SPECIES: AUTH SOURCE: Pittonia 3:346 (1900) Cakile lanceolata ssp. fusiformis (Greene) Rodman SYNONYM: Information is available in the Guide under the synonym. Cakile GENUS: GENOME: Cakile maritima SPECIES: geniculata (Robinson) Millsp. AUTH SOURCE: Field Columb. Mus. Bot. 2, 2:126 (1900) SYNONYM: Cakile Lanceolata (Willd.) O.E. Schulz Information is available in the Guide under this name. **GENUS:** Cakile **GENOME:** Cakile maritima harperi Small SPECIES: AUTH SOURCE: FL. S.E. United States :478 (1903) <u>Cakile edentula</u> ssp. <u>harperi</u> (Small) Rodman SYNONYM: Information is available in the Guide under the synonym. Cakile GFMUS: GENOME: Cakile maritima SPECIES: Lanceolata (Willd.) O.E. Schulz AUTH SOURCE: Urban, Symb. Antill. 3, 3:504 (1903) ssp. <u>alacranensis</u> (Millsp.) Rodman, Contrib. Gray Herb. 205:116 (1974); ssp. <u>fusiformis</u> (Greene) Rodman, Contrib. Gray Herb. 205:114 (1974); ssp. <u>lanceolata</u>; ssp. pseudoconstricta Rodman, Contrib. Gray Herb. 205:116 (1974) Cakile maritima Scop. Information is available in the Guide under this name. Cakile GENOME: Cakile maritima SPECIES: maritima Scop AUTH SOURCE: Fl. Carn. ed.2 2:35 (1772) ssp. aegyptiaca (Willd.) Nyman, Consp. :29 (1878);
ssp. baltica (Jordan ex Rouy & Foucaud) Hyl. ex P.W. Ball, Feddes Repert. 69:37 (1964);
ssp. euxina (Pobedimova) E. I. Nyárády: Savul., Fl. Rep. Pop. Române 3:480 (1955); SUBSPECIES: ssp. integrifolia (Hornem.) Greuter & Burdet: Greuter et al., Med-Checklist 3 (1986); ssp. <u>maritima</u> Information is available in the Guide under this name. Carrichtera GENOME: Carrichtera annua SPECIES: annua (L.) DC. AUTH SOURCE: Mém. Mus. Hist. Nat. Paris 7:250 (1821) SYNONYM: Vella annua L. Information is available in the Guide under this name. **GENUS:** GENOME: Ceratocnemum rapistroides Ceratocnemum

SPECIES: rapistroides Coss. & Bal.

AUTH SOURCE: Coss., Bull. Soc. Bot. Fr. 20:239 (1873)

Information is available in the Guide under this name.

GENOME: Chalcanthus renifolius Chalcanthus

renifolius Boiss SPECIES:

AUTH SOURCE: Fl. Orient. 1:212 (1867)

Information is available in the Guide under this name.

GENOME: Chalcanthus tuberosus Chalcanthus

SPECIES: tuberosus Kom.
AUTH SOURCE: Act. Hort. Petropol. 26(2):613 (1910) Information is available in the Guide under this name.

**GENOME:** Coincya GENUS: Coincya

cheiranthos (Vill.) Greuter & Burdet SPECIES:

AUTH SOURCE: Willdenowia 13:86 (1983)

SYNONYM: Coincya monensis ssp. recurvata (All.) Leadlay Information is available in the Guide under the synonym.

**GENOME:** Coincya GENUS: Coincya

SPECIES: coincyoides (Humbert & Maire) Greuter & Burdet
AUTH SOURCE: Willdenowia 13:87 (1983)

SYNONYH: Coincya monensis ssp. recurvata (All.) Leadlay Information is available in the Guide under the synonym.

**GENOME:** Coincya GENUS: Coincya

SPECIES: hispida (Cav.) Greuter & Burdet

AUTH SOURCE: Willdenowia 13:87 (1983)

Coincya monensis ssp. hispida (Cav.) Leadlay SYNONYN: Information is available in the Guide under the synonym.

GENUS: Coincya **GENOME:** Coincya

<u>johnstonii</u> (Samp.) Greuter & Burdet SPECIES.

AUTH SOURCE: Willdenowia 13:87 (1983)

Coincya monensis ssp. recurvata (All.) Leadlay SYNONYM: Information is available in the Guide under the synonym.

GENUS: Coincya **GENOME:** Coincya

leptocarpa (González-Albo) Greuter & Burdet SPECIES:

AUTH SOURCE: Willdenowia 13:87 (1983)

SYNONYH: Coincya rupestris spp. leptocarpa (González-Albo) Leadlay

Information is available in the Guide under the synonym.

GENUS: **GENOME:** Coincya Coincya

SPECIES: Longirostra (Boiss.) Greuter & Burdet AUTH SOURCE: Willdenowia 13:87 (1983)

Information is available in the Guide under this name.

GENUS: Coincya **GENOME:** Coincya

SPECIES: monensis (L.) Greuter & Burdet

AUTH SOURCE: Willdenowia 13:87 (1983)

ssp. hispida (Cav.) Leadlay: Leadlay & Heywood, Bot. J. Linn. Soc. 102:381 (1990); SUBSPECIES:

ssp. monensis;

ssp. nevadensis (Willk.) Leadlay: Leadlay & Heywood, Bot. J. Linn. Soc. 102:384 (1990); ssp. puberula (Pau) Leadlay: Leadlay & Heywood, Bot. J. Linn. Soc. 102:383 (1990); ssp. recurvata (All.) Leadlay: Leadlay & Heywood, Bot. J. Linn. Soc. 102:370 (1990)
Information is available in the Guide under this name.

GENUS: **GENOME:** Coincya Coincya

pseudoerucastrum (Brot.) Greuter & Burdet SPECIES:

AUTH SOURCE: Willdenowia 13:87 (1983)

SYNONYH: Coincya monensis ssp. recurvata (All.) Leadlay Information is available in the Guide under the synonym.

GENUS: **GENOME:** Coincya Coincya

SPECIES: puberula (Pau) Greuter & Burdet

AUTH SOURCE: Willdenowia 13:88 (1983)

SYNONYH: Coincya monensis ssp. puberula (Pau) Leadlay Information is available in the Guide under the synonym. GENUS: GENOME: Coincya Coincya

richeri (Vill.) Greuter & Burdet SPECIES:

AUTH SOURCE: Willdenowia 13:87 (1983)

Information is available in the Guide under this name.

GENOME: Coincya Coincya

SPECIES: rupestris Porta & Rigo ex Rouy
AUTH SOURCE: Deyrolle, Naturaliste (Paris) 2(13):248 (1891)

SUBSPECIES: ssp. leptocarpa (González-Albo) Leadlay: Leadlay and Heywood, Bot. J. Linn. Soc. 102:364;

ssp. <u>rupestris</u>
Information is available in the Guide under this name.

GENUS: **GENOME:** Coincya Coincya

SPECIES: transtagana (Cout.) Clemente & Hernández-Bermejo AUTH SOURCE: Lagascalia 14:138 (1986)

SYNONYM: Rhynchosinapis transtagana (Cout.) P. Silva;

Hutera hispida ssp. transtagana (Cout.) Gómez-Campo Information is available in the Guide under this name.

GENUS: GENOME: Coincya Coincya

SPECIES: Wrightii (O.E. Schulz) Stace AUTH SOURCE: Watsonia 17:443 (1989)

<u>Rhynchosinapis wrightii</u> (O.E. Schulz) Dandy ex Clapham; <u>Hutera wrightii</u> (O.E. Schulz) Gómez-Campo SYNONYM:

Information is available in the Guide under this name.

GENOME: Conringia austriaca GENUS: Conringia

SPECIES: austriaca (Jacq.) Sweet
AUTH SOURCE: Hort. Brit. 1:25 (1826)

Information is available in the Guide under this name.

GENOME: Conringia clavata

GENUS: Conringia SPECIES: <u>clavata</u> Boiss.

AUTH SOURCE: Ann. Sci. Nat. Bot. ser. 2,17:84 (1842)

Information is available in the Guide under this name.

Conringia GENUS: GENOME: Conringia grandiflora

SPECIES: grandiflora Boiss. & Heldr.
AUTH SOURCE: Boiss., Diagn. Pl. Orient. Nov. ser. 1, 8:25 (1849)

Information is available in the Guide under this name.

GENUS: **GENOME:** Conringia orientalis Conringia

SPECIES: <u>orientalis</u> (L.) Andrzejowski ex DC. AUTH SOURCE: DC., Reg. Veg. Syst. Nat. 2:508 (1821) Information is available in the Guide under this name.

GENUS: GENOME: Conringia clavata Conringia

SPECIES: perfoliata (C.A. Meyer) N. Busch AUTH SOURCE: Kom., Fl. SSSR 8:497 (1939) SYNONYM: Conringia clavata Boiss

Information is available in the Guide under the synonym.

GENUS: Conringia **GENOME:** Conringia persica

SPECIES: persica Boiss.

AUTH SOURCE: Diagn. Pl. Orient. ser, 1(6):12 (1845) Information is available in the Guide under this name.

GENUS: GENOME: Conringia planisiliqua Conringia

SPECIES: planisiliqua Fischer & C.A. Meyer AUTH SOURCE: Index Sem. Hort. Petropol. 3:32 (1837) Information is available in the Guide under this name.

Cordylocarpus GENOME: Cordylocarpus muricatus

SPECIES: muricatus Desf.

AUTH SOURCE: Fl. Atlant. 2:79, t. 152 (1798)

GENUS: GENOME: Raffenaldia primuloides Cossonia

SPECIES: africana Durieu

AUTH SOURCE: Ann. Sci. Nat. Bot. 3 ser. 20:83 (1853)

SYNONYM: Raffenaldia primuloides Godr.

Information is available in the Guide under the synonym.

GENUS: GENOME: Raffenaldia platycarpa Cossonia

SPECIES: platycarpa Coss.

AUTH SOURCE: Illustr. Fl. Atlant. 1:54 (1884) Raffenaldia platycarpa (Coss.) Stapf SYNONYM:

Information is available in the Guide under the synonym.

GENUS: Crambe GENOME: Crambe abyssinica

SPECIES: abyssinica Hochst. ex O.E. Schulz
AUTH SOURCE: Engler, Pflanzenr. IV. 105 (Heft 68-70):243 (1919)
Information is available in the Guide under this name.

GENUS: Crambe GENOME: Crambe orientalis

SPECIES: alutacea Hand.-Mazz.

AUTH SOURCE: Ann. K. K. Naturhist. Hofmus. 27:53 (1913)

Crambe orientalis var. alutacea (Hand.-Mazz.) Hedge & Hub-Mor., Notes R. B. G. Edinb. 26:181 (1965) SYNONYH:

Information is available in the Guide under the synonym.

GENUS: GENOME: Crambe strigosa Crambe

SPECIES: arborea Webb ex Christ

AUTH SOURCE: Engler, Bot. Jahrb. 9:94 (1887)

SYNONYH:

<u>Crambe</u> <u>strigosa</u> var. <u>arborea</u> (Webb) O.E. Schulz, Engler, Pflanzenr. IV 105 (Heft 68-70):249 (1919)

Information is available in the Guide under the synonym.

**GENUS:** Crambe GENOME: Crambe tataria

aspera M. Bieb. SPECIES:

AUTH SOURCE: Fl. Taur.-Cauc. 2:90 (1808)

SYNONYM: <u>Crambe tataria</u> var. <u>aspera</u> (M. Bieb.) Boiss., Fl. Orient. 1:406 (1867) Information is available in the Guide under the synonym.

GENUS: GENOME: Crambe orientalis Crambe

aucheri Boiss. SPECIES:

AUTH SOURCE: Ann. Sci. Nat. Bot. ser. 2,17:388 (1842)

SYNONYH: Crambe orientalis var. aucheri Boiss., Fl. Orient. 1:407 (1867)

Information is available in the Guide under the synonym.

Crambe GENUS: GENOME: Crambe cordifolia

cordifolia Steven SPECIES:

AUTH SOURCE: Mém. Soc. Nat. Moscou 3:267 (1812)

SUBSPECIES: ssp. cordifolia;

ssp. kotschyana (Boiss.) Jafri, Nasir & Ali, Fl. W. Pakistan 55:37 (1973)

Information is available in the Guide under this name.

GENUS: Crambe GENOME: Crambe edentula

edentula Fischer & C.A. Meyer

AUTH SOURCE: Bull. Soc. Impér. Natural. Moscou 2:145 (1839) Information is available in the Guide under this name.

GENUS: GENOME: Crambe filiformis Crambe

SPECIES: filiformis Jacq.
AUTH SOURCE: Icon. Pl. Rar. 3:8 (1786-1793)

Information is available in the Guide under this name.

GENUS: Crambe GENOME: Crambe fruticosa

SPECIES: fruticosa L. f.

AUTH SOURCE: Suppl. Pl. :299 (1781)
Information is available in the Guide under this name.

GENUS: GENOME: Crambe tataria Crambe

SPECIES: gibberosa Rupr.

AUTH SOURCE: Mém. Acad. Sci. Pétersb. 7, ser. 15, 2:136 (1869)

SYNONYM: Crambe tataria var. aspera (M. Bieb.) Boiss., Fl. Orient. 1:406 (1867)

GENUS: Crambe GENOME: Crambe orientalis

SPECIES: glaberrima (Bornm.) Greuter & Burdet

AUTH SOURCE: Willdenowia 15:417 (1986)

Crambe orientalis var. glaberrima (Bornm.) O.E. Schulz ex Bornm., SYNONYM:

Notizbl. Bot. Gart. Berl. 7, 64:141 (1917) Information is available in the Guide under the synonym.

**GENUS:** GENOME: Crambe strigosa Crambe

SPECIES: gomeraea Webb ex Christ

AUTH SOURCE: Engler, Bot. Jahrb. 9:94 (1887)

SYNONYM: Crambe strigosa L'Hér.

Information is available in the Guide under the synonym.

GENUS: Crambe GENOME: Crambe gordjaginii

SPECIES: gordjaginii Sprygin & Popov

AUTH SOURCE: Korovin, Kult. & Popov, Descr. Pl. Nov. Turkestan :87 (1916)

Information is available in the Guide under this name.

GENUS: GENOME: Crambe tataria Crambe

grandiflora DC. SPECIES:

AUTH SOURCE: Reg. Veg. Syst. Nat. 2:652 (1821)
SYNONYM: Crambe tataria Sebeók, aggr.

Information is available in the Guide under this name.

GENOME: Crambe hispanica

GENUS: Crambe

SPECIES: hispanica L. AUTH SOURCE: Sp. Pl. :671 (1753)

Information is available in the Guide under this name.

GENOME: Crambe orientalis

GENOME: Crambe kilimandscharica

GENUS: Crambe

SPECIES: juncea M. Bieb.
AUTH SOURCE: FL. Taur.-Caus. 3:421 (1819)

<u>Crambe orientalis</u> var. <u>juncea</u> (M. Bieb.) O.E. Schulz, <u>Engler</u>, <u>Pflanzenr</u>. IV. 105 (Heft 68-70):238 (1919)

Information is available in the Guide under the synonym.

GENUS: Crambe

SPECIES: <u>kilimandscharica</u> O.E. Schulz
AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):54 (1916) Information is available in the Guide under this name.

GENUS: **GENOME:** Crambe orientalis Crambe

SPECIES: koktebelica (Junge) N. Busch

AUTH SOURCE: Kuzn. & al., Fl. Caucas. Crit. 4, 3:296 (1908)

<u>Crambe orientalis var. koktebelica</u> (Junge) O.E. Schulz, Engler, Pflanzenr. IV 105 (Heft 68-70):239 (1919)

Information is available in the Guide under this name.

GENUS: GENOME: Crambe cordifolia Crambe

SPECIES: kotschyana Boiss.

AUTH SOURCE: Diagn. Pl. Orient. Nov. ser. 1, 6:19 (1845) SYNONYM: Crambe cordifolia ssp. kotschyana (Boiss.) Jafri Information is available in the Guide under the synonym.

GENUS: Crambe GENOME: Crambe kralikii

SPECIES: <u>kralikii</u> Coss. ex Reboud
AUTH SOURCE: Bull. Soc. Bot. France 4:466 (1857)

ssp. garamas (Maire) Podl., Mitt. Bot. Staatssaml. München 17:475 (1981); SUBSPECIES:

ssp. kralikii

Information is available in the Guide under this name.

GENUS: Crambe **GENOME:** Crambe laevigata

SPECIES: Laevigata DC. ex Christ
AUTH SOURCE: Engler, Bot. Jahrb. 9:94 (1887)
Information is available in the Guide under this name.

GENUS:

Crambe

GENOME: Crambe maritima

SPECIES: maritima L.

AUTH SOURCE: Sp. Pl. :671 (1753)

SYNONYM: <u>Crambe hispanica</u> L.

Information is available in the Guide under this name.

GENUS: Crambe SPECIES:

mitridatis Juz.

AUTH SOURCE: Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk. SSSR 14:9 (1951)

**GENOME:** Crambe orientalis

GENOME: Crambe tataria aggr.

Information is available in the Guide under this name.

GENUS: Crambe **GENOME:** Crambe orientalis

SPECIES: orientalis L.

AUTH SOURCE: Sp. Pl. :671 (1753)
Information is available in the Guide under this name.

GENUS: Crambe

parviflora Huber-Morath & Reese SPECIES: AUTH SOURCE: Repert. Spec. Nov. Regni Veg. 48:276 (1940) Information is available in the Guide under this name.

**GENUS:** Crambe GENOME: Crambe persica

SPECIES: persica Boiss.

AUTH SOURCE: Ann. Sci. Nat. Bot. 2 ser. 17:389 (1842) Information is available in the Guide under this name.

GENUS: GENOME: Crambe tataria aggr. Crambe

SPECIES: pinnatifida R. Br.

Aiton, Hort. Kew. ed. 2,4:72 (1812) AUTH SOURCE:

SYNONYH:

Crambe tataria var. pinnatifida (R. Br.) O.E. Schulz, Engler, Pflanzenr. IV 105 (Heft 68-70):235 (1919)

Information is available in the Guide under the synonym.

GENUS: GENOME: Crambe strigosa Crambe

SPECIES: <u>pritzelii</u> Bolle

AUTH SOURCE: Ind. Sem. Hort. Berol. :10 (1861)

SYNONYH: Crambe strigosa L'Hér.

Information is available in the Guide under this name.

GENOME: Crambe scaberrima Crambe

SPECIES: scaberrima Webb ex Bramwell
AUTH SOURCE: Cuad. Bot. Canar. 17:22 (1973)

Information is available in the Guide under this name.

**GENUS:** GENOME: Crambe schugnana Crambe

SPECIES: schugnana Korsh.

AUTH SOURCE: Bull. Acad. Sci. St. Pétersb. 5, ser. 9,5:422 (1898)

Information is available in the Guide under this name.

GENUS: Crambe GENOME: Crambe scoparia

SPECIES: scoparia Svent.

AUTH SOURCE: Bot. Inst. Nac. Invest. Agron., Madrid 13, 28:23 (1953)

Information is available in the Guide under this name.

GENUS: Crambe GENOME: Crambe sinuato-dentata

SPECIES: sinuato-dentata Hochst. ex Petri

AUTH SOURCE: Schweinfurth, Beitr. Fl. Aethiop. 1:238 (1867) Information is available in the Guide under this name.

GENUS. GENOME: Crambe tataria aggr. Crambe

steveniana Rupr. SPECIES:

AUTH SOURCE: Mém. Acad. Imp. Sci. St. Pétersb. ser. 7, 15(2):136 (1869)

Information is available in the Guide under this name.

GENUS: GENOME: Crambe strigosa Crambe

SPECIES: strigosa L'Hér.

AUTH SOURCE: Stirp. Nov. Fasc. 6:151 (1785)

GENUS: **GENOME:** Crambe sventenii Crambe

SPECIES: sventenii B. Petters ex Bramwell & Sundell AUTH SOURCE: Cuad. Bot. Canar. 17:21 (1973)

Information is available in the Guide under this name.

GENUS: GENOME: Crambe tataria Crambe

tataria Sebeók SPECIES:

AUTH SOURCE: Medico-Bot. Tatar. :7 (1779)

Information is available in the Guide under this name.

GENUS: Crambella GENOME: Crambella teretifolia

SPECIES: teretifolia (Batt. & Trabut) Maire

AUTH SOURCE: Bull. Soc. Hist. Nat. Afr. Nord 15:74 (1924) Information is available in the Guide under this name.

GENUS: Didesmus GENOME: Didesmus aegyptius

SPECIES: aegyptius (L.) Desv.
AUTH SOURCE: J. Bot. Agric. 3:160 (1814)

Information is available in the Guide under this name.

Didesmus **GENOME:** Didesmus bipinnatus

bipinnatus (Desf.) DC. SPECIES:

AUTH SOURCE: Reg. Veg. Syst. Nat. 2:659 (1821)

Information is available in the Guide under this name.

**GENUS:** <u>Diplotaxis</u> **GENOME:** Diplotaxis acris

SPECIES: acris (Forssk.) Boiss. AUTH SOURCE: Fl. Orient. 1:389 (1867)

Information is available in the Guide under this name.

GENUS: Diplotaxis GENOME: Diplotaxis assurgens-tenuisiliqua

SPECIES: <u>assurgens</u> (Del.) Gren. **AUTH SOURCE:** Fl. Massil. adv. 14 (1857)

Information is available in the Guide under this name.

GENUS: **Diplotaxis** GENOME: Diplotaxis berthautii

SPECIES: berthautii Braun-Blanq. & Maire

AUTH SOURCE: Bull. Soc. Hist. Nat. Afr. Nord 13:180 (1922) Information is available in the Guide under this name.

GENOME: Diplotaxis brachycarpa GENUS: Diplotaxis

SPECIES: brachycarpa Godr.

AUTH SOURCE: Mém. Acad. Stanislas 3(17):374 (1854) Information is available in the Guide under this name.

GENOME: Diplotaxis ibicensis-siettiana **GENUS: Diplotaxis** 

SPECIES: brevisiliqua (Coss.) Martinez-Laborde
AUTH SOURCE: Willdenowia 21:66 (1991)

Information is available in the Guide under this name.

GENOME: Diplotaxis catholica-virgata **Diplotaxis** 

SPECIES: catholica (L.) DC.
AUTH SOURCE: Reg. Veg. Syst. Nat. 2:632 (1821)

Information is available in the Guide under this name.

GENUS: GENOME: Diplotaxis cossoniana Diplotaxis

SPECIES: cossoniana (Reut. ex Boiss.) O.E. Schulz
AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):55 (1916)
Information is available in the Guide under this name.

GENOME: Diplotaxis harra GENUS: Diplotaxis

SPECIES: crassifolia (Raf.) DC.

AUTH SOURCE: Reg. Veg. Syst. Nat. 2:629 (1821)
SYNONYM: Diplotaxis harra ssp. crassifolia (Raf.) Maire Information is available in the Guide under the synonym.

**GENOME:** Diplotaxis tenuifolia-simplex Diplotaxis

SPECIES: <u>cretacea</u> Kotov AUTH SOURCE: Klokov et al., Ukr. Bot. Zhurn. 3:17 (1926) Information is available in the Guide under this name.

GENOME: Diplotaxis erucoides **GENUS:** Diplotaxis SPECIES: erucoides (L.) DC. AUTH SOURCE: Reg. Veg. Syst. Nat. 2:631 (1821) Information is available in the Guide under this name. GENOME: Diplotaxis cossoniana <u>Diplotaxis</u> SPECIES: erucoides ssp. cossoniana (Boiss.) Martínez-Laborde AUTH SOURCE: Bot. J. Linn. Soc. 106:68 (1991) Diplotaxis cossoniana (Reut. ex Boiss.) O.E. Schulz SYNONYM: Information is available in the Guide under the synonym. Diplotaxis GENOME: Diplotaxis cossoniana **GENUS:** SPECIES: erucoides ssp. longisiliqua (Coss.) Gómez-Campo AUTH SOURCE: Anal. Jard. Bot. Madrid 38:30 (1981) SYNONYM: <u>Diplotaxis</u> <u>cossoniana</u> (Reut. ex Boiss.) O.E. Schulz Information is available in the Guide under the synonym. GENUS: **GENOME:** Diplotaxis harra **Diplotaxis** <u>glauca</u> (J. A. Schmidt) O.E. Schulz SPECIES: Engler, Bot. Jahrb. 54 (Beibl. 119):55 (1916) AUTH SOURCE: Diplotaxis harra ssp. glauca (J.A. Schmidt) Sobrino SYNONYM: Information is available in the Guide under the synonym. GENUS: GENOME: Diplotaxis ibicensis-siettiana <u>Diplotaxis</u> SPECIES: gomez-campoi Martinez-Laborde AUTH SOURCE: Willdenowia 21:66 (1991) Information is available in the Guide under this name. GENOME: Diplotaxis harra <u>Diplotaxis</u> SPECIES: gracilis (Webb) O.E. Schulz

AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916)

Information is available in the Guide under this name. Diplotaxis GENOME: Diplotaxis griffithii SPECIES: griffithii (Hook f. & Thomson) Boiss. AUTH SOURCE: Fl. Orient. 1:388 (1867) Information is available in the Guide under this name. GENUS: <u>Diplotaxis</u> GENOME: Diplotaxis harra SPECIES: harra (Forssk.) Boiss. AUTH SOURCE: Fl. Orient. 1:388 (1867) ssp. crassifolia (Raf.) Maire, Bull. Soc. Hist. Nat. Afr. Nord 24:198 (1933); SUBSPECIES: ssp. glauca (J.A. Schmidt) Sobrino, Candollea 48:137-144; ssp. harra; ssp. hirta (Cheval) Sobrino, Candollea 48:137-144; ssp. lagascana (DC.) O. Bolòs & Vigo, Fl. Països Catal. 2:57 (1990); ssp. <u>numidica</u> Martínez-Laborde, [Ph.D. thesis 1988] Information is available in the Guide under this name. GENUS: GENOME: Diplotaxis harra <u>Diplotaxis</u> hirta (Cheval) Rustan & Borgen SPECIES: AUTH SOURCE: Bocagiana (Funchal) 47:1-5 (1979) SYNONYM: Diplotaxis harra ssp. hirta (Cheval) Sobrino Information is available in the Guide under the synonym. GENUS: Diplotaxis GENOME: Diplotaxis ibicensis-siettiana SPECIES: <u>ibicensis</u> (Font Quer) Gómez-Campo AUTH SOURCE: Anal. Jard. Bot. Madrid 38:32 (1981) Information is available in the Guide under this name. GENUS: **Diplotaxis** GENOME: Diplotaxis harra SPECIES: lagascana DC. AUTH SOURCE: Reg. Veg. Syst. Nat. 2:629 (1821) SYNONYM: Diplotaxis harra ssp. lagascana (DC.) O. Bolòs & Vigo Information is available in the Guide under the synonym. GENUS: **Diplotaxis** GENOME: Diplotaxis muralis SPECIES: muralis (L.) DC. AUTH SOURCE: Veg. Syst. Nat. 2:634 (1821) ssp. ceratophylla (Batt.) Martinez-Laborde, Bot. J. Linn. Soc. 106:69 (1991);

ssp. <u>muralis</u>
Information is available in the Guide under this name.

GENUS: <u>Diplotaxis</u> **GENOME:** Diplotaxis nepalensis

SPECIES: nepalensis Hara
AUTH SOURCE: J. Jap. Bot. 49:129 (1974)

Information is available in the Guide under this name.

GENUS: GENOME: Diplotaxis ollivieri Diplotaxis

SPECIES: <u>ollivieri</u> Maire

AUTH SOURCE: Bull. Soc. Hist. Nat. Afr. Nord 28:335 (1937) Information is available in the Guide under this name.

Diplotaxis GENUS: GENOME: Diplotaxis pitardiana

SPECIES: <u>pitardiana</u> Maire

AUTH SOURCE: Bull. Soc. Hist. Nat. Afr. Nord 9:175 (1918)

Information is available in the Guide under this name.

Diplotaxis GENUS: GENOME: Diplotaxis ibicensis-siettiana

SPECIES: <u>siettiana</u> Maire

AUTH SOURCE: Bull. Soc. Hist. Nat. Afr. Nord. 24:198 (1933) Information is available in the Guide under this name.

Diplotaxis GENUS: GENOME: Diplotaxis siifolia

SPECIES: siifolia G. Kunze
AUTH SOURCE: Flora (Regensb.) 29:685 (1846)

ssp. bipinnatifida (Coss.) Martínez-Laborde, [Ph.D. thesis 1988];

ssp. siifolia; ssp. vicentina (Cout.) Martinez-Laborde, [Ph.D. thesis 1988]

Information is available in the Guide under this name.

GENUS: Diplotaxis GENOME: Diplotaxis tenuifolia-simplex

SPECIES: simplex (Viv.) Spreng

AUTH SOURCE: Syst. Veg. 2:914 (1825)

Information is available in the Guide under this name.

GENOME: Diplotaxis tenuifolia-simplex GENUS: <u>Diplotaxis</u>

tenuifolia (L.) DC.

AUTH SOURCE: Reg. Veg. Syst. Nat. 2:632 (1821)
Information is available in the Guide under this name.

Diplotaxis GENUS: GENOME: Diplotaxis assurgens-tenuisiliqua

SPECIES: tenuisiliqua Del.
AUTH SOURCE: Index Sem. Hort. Monspel. 12:7 (1847)

ssp. rupestris (Ball) Martinez-Laborde, Bot. J. Linn. Soc. 106:70 (1991); ssp. tenuisiliqua SUBSPECIES:

Information is available in the Guide under this name.

GENUS: <u>Diplotaxis</u> **GENOME:** Diplotaxis villosa

villosa Boulos & Jallad SPECIES: AUTH SOURCE: Bot. Not. 128:365 (1975)

Information is available in the Guide under this name.

<u>Diplotaxis</u> **GENOME:** Diplotaxis viminea GENUS:

SPECIES: viminea (L.) DC.
AUTH SOURCE: Reg. Veg. Syst. Nat. 2:635 (1821)

Information is available in the Guide under this name.

GENUS: <u>Diplotaxis</u> GENOME: Diplotaxis catholica-virgata

SPECIES: virgata (Cav.) DC.

AUTH SOURCE: Reg. Veg. Syst. Nat. 2:631 (1821)

Information is available in the Guide under this name.

GENUS: GENOME: Diplotaxis "sahariensis" <u>Diplotaxis</u>

SPECIES: virgata f. sahariensis Coss.
AUTH SOURCE: Comp. Fl. Atlant. 2:165 (1887)

GENOME: Diplotaxis harra Diplotaxis

SPECIES: voqelii (Webb) O.E. Schulz
AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916) Information is available in the Guide under this name.

Distomocarpus GENOME: Rytidocarpus moricandioides

maroccanus O.E. Schulz SPECIES:

AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):53 (1916) SYNONYM: Rytidocarpus moricandioides Coss.
Information is available in the Guide under the synonym.

GENUS: GENOME: Dolichorhynchus arabicus Dolichorhynchus

SPECIES: arabicus Hedge & Kit Tan AUTH SOURCE: Pl. Syst. Evol. 156:197 (1987)

Information is available in the Guide under this name.

Douepia GENOME: Douepia tortuosa

SPECIES: tortuosa Cambess.

AUTH SOURCE: Jacquem., Voy. Ind. Bot. 4:18 (1844) Information is available in the Guide under this name.

**GENUS:** GENOME: Enarthrocarpus arcuatus

Enarthrocarpus SPECIES: arcuatus Labill

AUTH SOURCE: Icon. Pl. Syr. 5:4 (1812) Information is available in the Guide under this name.

GENOME: Enarthrocarpus clavatus Enarthrocarpus

SPECIES: clavatus Del. ex Godr.

AUTH SOURCE: Mém. Acad. Sci. Montpellier, sect. Méd. 1:412 (1853)

Information is available in the Guide under this name.

GENUS: Enarthrocarpus GENOME: Enarthrocarpus lyratus

SPECIES: Lyratus (Forssk.) DC.
AUTH SOURCE: Reg. Veg. Syst. Nat. 2:661 (1821)

Information is available in the Guide under this name.

GENUS: Enarthrocarpus GENOME: Enarthrocarpus pterocarpus

SPECIES:

pterocarpus (Pers.) DC.

AUTH SOURCE: Reg. Veg. Syst. Nat. 2:661 (1821)

Information is available in the Guide under this name.

GENUS: Enarthrocarpus GENOME: Enarthrocarpus strangulatus

SPECIES: strangulatus Boiss.

AUTH SOURCE: Diagn. Pl. Orient. Nov. ser. 1, 8:44 (1849) Information is available in the Guide under this name.

GENUS: GENOME: Eremophyton chevallieri Eremophyton

chevallieri (Barr.) Bég SPECIES.

AUTH SOURCE: Bull. Soc. Bot. Ital. :102 (1913)

Information is available in the Guide under this name.

GENUS: Eruca GENOME: Eruca loncholoma

SPECIES: loncholoma (Pomel) O.E. Schulz

AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916) Information is available in the Guide under this name.

GENUS: GENOME: Eruca vesicaria Eruca

SPECIES: pinnatifida (Desf.) Pomel

AUTH SOURCE: Nouv. Mat. Fl. Atl. :367 (1875)

Eruca vesicaria ssp. pinnatifida (Desf.) Emb. & Maire

Information is available in the Guide under the synonym.

GENUS: GENOME: Eruca vesicaria Eruca

sativa Mill. SPECIES:

AUTH SOURCE: Gard. Dict. ed.8(1) (1768)

SYNONYM: Eruca vesicaria ssp. sativa (Mill.) Thell. Information is available in the Guide under the synonym.

GENUS: **GENOME:** Eruca setulosa

SPECIES: setulosa Boiss. & Reut.

AUTH SOURCE: Boiss. Diagn. Pl. Orient. ser. 2, 5:26 (1856) Information is available in the Guide under this name.

GENUS: GENOME Eruca vesicaria Eruca

SPECIES: <u>vesicaria</u> (L.) Cav. AUTH SOURCE: Descr. Pl. 426 (1802)

ssp. pinnatifida (Desf.) Emb. & Maire: Jahandiez & Maire, Cat. Maroc 1004 (1941); SUBSPECIES:

ssp. sativa (Mill.) Thell., Ill. Fl. Mitteleur. 4(1):201 (1918);

ssp. vesicaria

Information is available in the Guide under this name.

GENUS: GENOME: Erucaria pinnata

Erucaria SPECIES: aegiceras J. Gay

AUTH SOURCE: Steudel, Nomencl. ed.1, 2:590 (1840)
SYNONYM: Erucaria pinnata (Viv.) Täckh. & Boulos Information is available in the Guide under the synonym.

GENUS: GENOME: Erucaria bornmuelleri Erucaria

SPECIES: bornmuelleri O.E. Schulz
AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):55 (1916)
Information is available in the Guide under this name.

**GENUS:** Erucaria GENOME: Erucaria rostrata

SPECIES: boveana Coss.

AUTH SOURCE: Coss. & Barratte, Illustr. Fl. Atlant. Fasc. 2, 1:45 (1884)

SYNONYH: Erucaria rostrata (Boiss.) Greuter & Burdet Information is available in the Guide under the synonym.

GENOME: Erucaria cakiloidea Erucaria

SPECIES: cakiloidea (DC.) O.E. Schulz
AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916)
Information is available in the Guide under this name.

GENUS: Erucaria GENOME: Frucaria crassifolia

crassifolia (Forssk.) Del. SPECIES:

AUTH SOURCE: Descr. Egypt. Illustr. in Mém. Bot. 4:20 (1813) Information is available in the Guide under this name.

GENUS: Erucaria GENOME: Erucaria erucarioides

SPECIES: erucarioides (Coss. & Durieu) C. Mueller

AUTH SOURCE: Ann. Bot. Syst. 7:178 (1868)

Reboudia erucarioides Coss. & Durieu SYNONYM: Information is available in the Guide under this name.

GENUS: GENOME: Erucaria hispanica Erucaria

SPECIES: hispanica (L.) Druce

AUTH SOURCE: Rep. Bot. Exch. Club Soc. Brit. Isles 3:418 (1914)

Erucaria myagroides (L.) Halácsy SYNONYH:

Information is available in the Guide under this name.

GENUS: GENOME: Erucaria microcarpa

Erucaria SPECIES: microcarpa Boiss.

AUTH SOURCE: Diagn. Pl. Orient. Nov. ser. 1, 8:47 (1849)
SYNONYM: Reboudia pinnata (Viv.) O.E. Schulz Information is available in the Guide under this name.

GENUS: GENOME: Erucaria hispanica Erucaria

SPECIES: myagroides (L.) Halácsy
AUTH SOURCE: Consp. Fl. Graec. 1:123 (1900)

SYNONYH: Erucaria hispanica (L.) Druce

Information is available in the Guide under the synonym.

GENUS: GENOME: Erucaria ollivieri Erucaria

SPECIES: ollivieri Maire

AUTH SOURCE: Bull. Soc. Hist. Nat. Afr. Nord 30:331 (1940) Information is available in the Guide under this name.

GENUS: GENOME: Erucaria pinnata Erucaria

SPECIES: pinnata (Viv.) Täckh. & Boulos AUTH SOURCE: Publ. Cairo Univ. Herb. 5:37 (1974)

SUBSPECIES: ssp. pinnata;

ssp. uncata (Boiss.) Greuter & Burdet, Willdenowia 13:88 (1983)

GENOME: Erucaria rostrata Erucaria

SPECIES: rostrata (Boiss.) Greuter & Burdet
AUTH SOURCE: Willdenowia 15:419 (1986)

Information is available in the Guide under this name.

GENOME: Erucaria pinnata **GENUS**-Erucaria

uncata (Boiss.) Aschers. & Schweinf. SPECIES:

AUTH SOURCE: Mém. Inst. Egypt 2:40 (1889)

Erucaria pinnata ssp. uncata (Boiss.) Greuter & Burdet SYNONYM:

Information is available in the Guide under the synonym.

GENUS: GENOME: Erucastrum arabicum-abyssinicum Erucastrum

SPECIES. abyssinicum (A. Rich.) O.E. Schulz

AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119): (1916) Information is available in the Guide under this name.

GENUS: Erucastrum GENOME: Erucastrum arabicum-abyssinicum

SPECIES: arabicum Fischer & C.A. Meyer AUTH SOURCE: Ind. Sem. Hort. Petrop. 5:35 (1839) Information is available in the Guide under this name.

GENUS: GENOME: Erucastrum brevirostre Erucastrum

SPECIES: brevirostre (Maire) Gómez-Campo AUTH SOURCE: Anal. Jard. Bot. Madrid 41:85 (1984) Information is available in the Guide under this name.

GENUS: GENOME: Erucastrum canariense-cardaminioides Erucastrum

SPECIES: canariense Webb & Berthel.
AUTH SOURCE: Hist. Nat. Canary Is. :81 (1836-1840) Information is available in the Guide under this name.

GENUS: Erucastrum GENOME: Erucastrum canariense-cardaminioides

SPECIES: cardaminioides (Webb) O.E. Schulz

AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916) Information is available in the Guide under this name.

GENUS: . Erucastrum GENOME: Erucastrum elatum

SPECIES: elatum (Ball) O.E. Schulz

AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916)

Erucastrum laevigatum ssp. elatum (Ball) Maire & Weiller; SYNONYH:

Brassica elata Ball

Information is available in the Guide under this name.

GENUS: Erucastrum GENOME: Erucastrum elgonense

elgonense Jonsell SPECIES:

AUTH SOURCE: Bot. Notiser 132:529 (1979)

Information is available in the Guide under this name.

GENUS: GENOME: Erucastrum gallicum Erucastrum

gallicum (Willd.) O.E. Schulz SPECIES:

AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916) Information is available in the Guide under this name.

**GENUS:** GENOME: Erucastrum ifniense Erucastrum

ifniense Gómez-Campo

AUTH SOURCE: Anal. Jahrb. Bot. Madrid 41:84 (1984) Information is available in the Guide under this name.

GENUS: Erucastrum GENOME: Erucastrum virgatum

SPECIES: Laevigatum (L.) O.E. Schulz
AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916) Erucastrum elatum (Ball) O.E. Schulz; SYNONYH: Erucastrum Littoreum (Pau & Font Quer) Maire; Erucastrum virgatum (J. C. Presl) C. Presl

Information is available in the Guide under the synonyms.

GENUS: Erucastrum GENOME: Erucastrum nasturtiifolium-leucanthum

SPECIES: leucanthum Coss. & Durieu ex Coss. AUTH SOURCE: Bull. Soc. Bot. Fr. 2:307 (1855)

GENUS: **Erucastrum** GENOME: Brassica fruticulosa SPECIES: <u>littoreum</u> (Pau & Font Quer) Maire AUTH SOURCE: Cavanillesia 2:46 (1929) ssp. brachycarpum (Maire & Weiller) Gómez-Campo, Anal. Jard. Bot. Madrid 40:71 (1983); ssp. glabrum (Maire) Gómez-Campo, Anal. Jard. Bot. Madrid 40:71 (1983); ssp. Littoreum (Pau & Font Quer) Maire, sensu Gómez-Campo, Anal. Jard. Bot. Madrid 40:71 SUBSPECIES: (1983); <u>Erucastrum Laeviqatum</u> ssp. <u>Littoreum</u> (Pau & Font Quer) Maire; <u>Erucastrum Laeviqatum</u> ssp. <u>qlabrum</u> Maire SYNONYM: Information is available in the Guide under this name. **GENOME:** Erucastrum meruense Erucastrum meruense Jonsell SPECIES: AUTH SOURCE: Bot. Notiser 132:530 (1979) Information is available in the Guide under this name. GENOME: Erucastrum nasturtiifolium-leucanthum SPECIES: nasturtiifolium (Poiret) O.E. Schulz
AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916) Information is available in the Guide under this name. SPECIES: Paching **GENOME:** Erucastrum arabicum—abyssinicum pachypodum (Chiov.) Jonsell AUTH SOURCE: Bot. Notiser 129:127 (1976) Information is available in the Guide under this name. Erucastrum GENOME: Erucastrum nasturtiifolium-leucanthum SPECIES: palustre (Pirona) Vis.
AUTH SOURCE: Linnaea 28:365 (1856) Information is available in the Guide under this name. GENUS: GENOME: Brassica fruticulosa Erucastrum SPECIES: rifanum (Emb. & Maire) Gómez-Campo AUTH SOURCE: Anal. Jard. Bot. Madrid 38:353 (1982) <u>Brassica fruticulosa</u> ssp. <u>rifana</u> (Emb. & Maire) Maire; <u>Brassica rifana</u> Emberger & Maire Information is available in the Guide under this name. GENUS: Erucastrum GENOME: Erucastrum strigosum SPECIES: strigosum (Thunb.) O.E. Schulz AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916) Information is available in the Guide under this name. GENUS: **GENOME:** Erucastrum varium Erucastrum SPECIES: thellungii O.E. Schulz AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):54 (1916)

SYNONYM: Erucastrum varium ssp. incrassatum (Thell.) Maire

Information is available in the Guide under the synonym. GENOME: Erucastrum varium GENUS: Erucastrum SPECIES: varium Durieu AUTH SOURCE: Expl. Sci. Algérie, Bot. Atlas: t. 75 (1849)

SUBSPECIES: ssp. barbei Vindt, Compt.-Rend. Séances Mens. Soc. Sci. Nat. Maroc 21:96 (1955);

ssp. brevirostre (see Frucastrum brevirostre);

ssp. incrassatum (Thell.) Maire, Mém. Soc. Sci. Nat. Maroc 17:26 (1928); ssp. mesatlanticum Maire & Wilczek, Bull. Soc. Hist. Nat. Afr. Nord 25:289 (1934); ssp. subsiifolium Maire, Bull. Soc. Hist. Nat. Afr. Nord 25:289 (1934); ssp. <u>varium</u> Information is available in the Guide under this name. GENUS: GENOME: Erucastrum virgatum Erucastrum SPECIES: virgatum (J. C. Presl) C. Presl AUTH SOURCE: Fl. Sicula 1:94 (1826) SUBSPECIES: ssp. baeticum (Boiss.) Gómez-Campo, Anal. Jard. Bot. Madrid 40:66 (1983); ssp. brachycarpum (Rouy) Gómez-Campo, Anal. Jard. Bot. Madrid 40:68 (1983), ssp. pseudosinapis (Lange) Gómez-Campo, Anal. Jard. Bot. Madrid 40:68 (1983); ssp. virgatum SYNONYH: Erucastrum Laevigatum (L.) O.E. Schulz Information is available in the Guide under this name.

GENOME: Euzomodendron bourgaeanum Euzomodendron SPECIES: bourgaeanum Coss AUTH SOURCE: Notes Pl. Crit. Midi Espagne 4:145 (1852) Information is available in the Guide under this name. GENOME: Hemicrambe fruticosa <u>Fabrisinapis</u> SPECIES: fruticosus C.C. Townsend AUTH SOURCE: Hooker's Icon. Plant. 7:1, t. 3673 (1971)
SYNONYM: Hemicrambe fruticosa (C.C. Townsend) Gómez-Campo Information is available in the Guide under the synonym. GENUS: GENOME: Fezia pterocarpa **Fezia** SPECIES: pterocarpa Pitard AUTH SOURCE: Genre Cruc. Maroc :1 (1917) Information is available in the Guide under this name. GENUS: <u>Foleyola</u> GENOME: Foleyola billotii SPECIES: billotii Maire AUTH SOURCE: Bull. Soc. Hist. Nat. Afr. Nord 16:90 (1925) Information is available in the Guide under this name. GENUS: <u>Fortuynia</u> GENOME: Fortuynia garcinii SPECIES: <u>aucheri</u> Shuttl. ex Boiss. AUTH SOURCE: Boiss., Ann. Sci. Nat. Bot. ser. 2,16:379 (1841) Fortuynia garcinii (Burm.) Shuttl. ex Boiss. : HYMONY? Information is available in the Guide under the synonym. GENUS: Fortuynia GENOME: Fortuynia bungei SPECIES: <u>bungei</u> Boiss. AUTH SOURCE: Fl. Orient. 1:402 (1867) Information is available in the Guide under this name. GENUS. Fortuynia GENOME: Fortuynia garcinii SPECIES: garcinii (Burm.) Shuttl. ex Boiss.
AUTH SOURCE: Boiss., Ann. Sci. Nat. Bot. ser. 2., 17:178 (1842) Information is available in the Guide under this name. GENUS: GENOME: Guiraoa arvensis Guiraoa SPECIES: arvensis Coss. AUTH SOURCE: Notes Pl. Crit. Midi Espagne 3:98 (1851) Information is available in the Guide under this name. GENUS: <u>Hemicrambe</u> GENOME: Hemicrambe fruticosa SPECIES: <u>fruticosa</u> (C.C. Townsend) Gómez-Campo AUTH SOURCE: Lagascalia 7(2):189 (1978) Information is available in the Guide under this name. GENUS: Hemicrambe GENOME: Hemicrambe fruticulosa SPECIES: fruticulosa Webb AUTH SOURCE: Ann. Sci. Nat. Bot. ser. 3,16:248 (1851) Information is available in the Guide under this name. GENUS: Henophyton GENOME: Henophyton deserti SPECIES: deserti (Coss. & Durieu) Coss. & Durieu AUTH SOURCE: Ann. Sci. Nat. Bot. ser. 4,4:282 (1855) SUBSPECIES: ssp. deserti; ssp. zygarrhenum (Maire) Greuter & Burdet, Willdenowia 13:93 (1983)

GENUS: SPECIES:

Hirschfeldia

incana (L.) Lagrèze-Fossat AUTH SOURCE: Fl. Tarn Garonne :19 (1847)

SUBSPECIES:

ssp. consobrina (Pomel ex Batt.) Maire, Bull. Soc. Hist. Nat. Afr. Nord 31:10 (1940); ssp. geniculata (Desf.) Maire: Jahandiez & Maire, Cat. Pl. Maroc :285 (1932);

GENOME: Hirschfeldia incana

ssp. incana;

Information is available in the Guide under this name.

ssp. leptocarpa Tsvelev, Novosti Sist. Vyssh. Rast. 14:249 (1977)

SYNONYM: Brassica adpressa Boiss.;

<u>Sinapis incana</u> L.

Hirschfeldia GENUS: GENOME: Hirschfeldia rostrata rostrata (Balf. f.) O.E. Schulz SPECIES: AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916)

SYNONYM: Brassica rostrata Balf. f., Proceed. Royal Soc. Edinburgh 11:500 (1882) Information is available in the Guide under this name. GENUS: <u>Hutera</u> GENOME: Coincya AUTH SOURCE: Porta Coincya Porta & Rigo ex Rouy SYNONYH: Information is available in the Guide under the synonym. Kremeriella GENOME: Kremeriella cordylocarpus SPECIES: cordylocarpus (Coss. & Durieu ex Coss.) Maire AUTH SOURCE: Jahandiez & Maire, Cat. Pl. Maroc :293 (1932) Information is available in the Guide under this name. Moricandia **GENOME:** Moricandia arvensis SPECIES: arvensis (L.) DC. AUTH SOURCE: Reg. Veg. Syst. Nat. 2:626 (1821) SUBSPECIES: ssp. arvensis; ssp. nitens (Viv.) Maire, Bull. Soc. Hist. Nat. Afr. Nord 30:259 (1939); ssp. spinosa (Pomel) Batt.: Batt. & Trabut, Fl. Algérie 1:65 (1888); ssp. suffruticosa (Desf.) Maire, Mém. Soc. Sci. Nat. Maroc. 21-22:5(1930) Information is available in the Guide under this name. GENUS: GENOME: Moricandia moricandioides Moricandia baetica Boiss. & Reut. AUTH SOURCE: Pugill. Pl. Afr. Bor. Hispan. :8 (1852) SYNONYM: Moricandia ramburii var. microsperma Willk., in Willk. & Lange, Prodr. Fl. Hispan. 4:869 (1880) Information is available in the Guide under the synonym. GENUS: GENOME: Moricandia foetida Moricandia SPECIESfoetida Bourgeau ex Coss. AUTH SOURCE: Coss., Notes Pl. Crit. Midi Espagne 4:143 (1852) Information is available in the Guide under this name. GENUS: Moricandia GENOME: Moricandia foleyi SPECIES: foleyi Batt. AUTH SOURCE: Bull. Soc. Bot. Fr. 61:52 (1914) Information is available in the Guide under this name. GENUS: Moricandia GENOME: Moricandia arvensis SPECIES: <u>longirostris</u> Pomel AUTH SOURCE: Nouv. Mat. Fl. Atlant. :367 (1875) SYNONYM: Moricandia arvensis prol. Longirostris (Pomel) O.E. Schulz, Engler, Pflanzenr. IV 105 (Heft 82):68 (1923); Information is available in the Guide under this name. GENUS: GENOME: Moricandia moricandioides Moricandia SPECIES: moricandioides (Boiss.) Heywood AUTH SOURCE: Feddes Repert. 66:154 (1962) ssp. cavanillesiana (Font Quer & A. Bolós) Greuter & Burdet: Greuter et al.,
Med.-Checklist 3 (1986); SUBSPECIES: ssp. giennensis Valdés-Bermejo, Anal. Inst. Bot. Cavanilles 31(1):71 (1974); ssp. moricandioides Information is available in the Guide under this name.

GENOME: Moricandia arvensis
SPECIES: nitens (Viv.) Durieu & Barr.
AUTH SOURCE: Prodr. Fl. Lib. :15 (1910)

SYNONYM: Moricandia arvensis ssp. nitens (Viv.) Maire Information is available in the Guide under this name.

GENUS: Moricandia GENOME: Moricandia moricandioides

SPECIES: ramburii Webb
AUTH SOURCE: Iter Hisp. :73 (1838)

SYNONYM: Moricandia moricandioides (Boiss.) Heywood Information is available in the Guide under the synonym.

GENOME: Moricandia arvensis GENUS: Moricandia

SPECIES: sinaica (Boiss.) Boiss AUTH SOURCE: Fl. Orient. 1:386 (1867)

Information is available in the Guide under this name.

GENOME: Moricandia arvensis GENUS: Moricandia

spinosa Pomel SPECIES:

AUTH SOURCE: Nouv. Mat. Fl. Atlant. :365 (1874)

Moricandia arvensis ssp. spinosa (Pomel) Batt. SYNONYH: Information is available in the Guide under this name.

GENUS: GENOME: Moricandia arvensis Moricandia

suffruticosa (Desf.) Coss. & Durieu SPECIES:

AUTH SOURCE: Coss., Ann. Sci. Nat. Bot. ser. 4,4:282 (1855) SYNONYM: Moricandia arvensis ssp. suffruticosa (Desf.) Maire Information is available in the Guide under this name.

GENUS: Morisia GENOME: Morisia monanthos

SPECIES: monanthos (Viv.) Asch.

AUTH SOURCE: W. Barbey, Fl. Sard. Comp. :173 (1884)

Information is available in the Guide under this name.

GENUS: Muricaria GENOME: Muricaria prostrata

SPECIES: prostrata (Desf.) Desv. AUTH SOURCE: J. Bot. Agric. 3, 4:159 (1814)

Information is available in the Guide under this name.

GENUS: GENOME: Otocarpus virgatus Otocarpus

SPECIES: virgatus Durieu

AUTH SOURCE: Duchartre, Rev. Bot. Recueil Mens. 2:435 (1847) Information is available in the Guide under this name.

GENUS: GENOME: -Oudneya

AUTH SOURCE: R. Brown

Henophyton Coss. & Durieu SYNONYM:

Information is available in the Guide under the synonym.

GENUS: Oudneya GENOME: Henophyton deserti

africana R. Brown SPECIES:

AUTH SOURCE: Dehnh. & Clapperton, Narr. Travels Africa :220 (1826) [nom. illeg.]

Henophyton deserti (Coss. & Durieu) Coss. & Durieu

Information is available in the Guide under the synonym.

GENOME: Henophyton deserti GENUS: Oudneya

SPECIES: deserti (Coss. & Durieu) Bullock

AUTH SOURCE: Kew Bull. 19:201 (1965)

SYNOHYH: Henophyton deserti (Coss. & Durieu) Coss. & Durieu Information is available in the Guide under the synonym.

GENUS: <u>Oudneya</u> GENOME: Henophyton deserti

SPECIES: zygarrhena Maire

AUTH SOURCE: Bull. Soc. Hist. Nat. Afr. Nord 36:90 (1946)

SYNONYH: Henophyton deserti ssp. zygarrhenum (Maire) Greuter & Burdet

Information is available in the Guide under the synonym.

GENUS: GENOME: Physorrhynchus brahuicus <u>Physorrhynchus</u>

SPECIES: brahuicus Hook.

AUTH SOURCE: Icon. Pl. ser. 2,5:821 (1852)

Information is available in the Guide under this name.

GENUS: Physorrhynchus GENOME: Physorrhynchus chamaerapistrum

chamaerapistrum (Boiss.) Boiss. SPECIES:

AUTH SOURCE: Fl. Orient. 1:403 (1867) Information is available in the Guide under this name.

GENUS: Pseuderucaria GENOME: Pseuderucaria clavata

clavata (Boiss. & Reut.) O.E. Schulz SPECIES:

AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):54 (1916)

SUBSPECIES: ssp. clavata;

ssp. tourneuxii (Coss.) Maire, Mém. Soc. Hist. Nat. Afr. Nord 3:110 (1933)

Information is available in the Guide under this name.

Pseuderucaria **GENOME:** Pseuderucaria teretifolia

SPECIES: teretifolia (Desf.) O.E. Schulz

AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):54 (1916) Information is available in the Guide under this name.

GENOME: Pseuderucaria clavata GENUS: <u>Pseuderucaria</u>

SPECIES: tourneuxii (Coss.) O.E. Schulz

AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):54 (1916) SYNONYM: Pseuderucaria clavata ssp. tourneuxii (Coss.) Maire

Information is available in the Guide under the synonym.

Pseudocytisus **GENOME:** Vella GENUS:

AUTH SOURCE: Kuntze SYNONYM: Vella L

Information is available in the Guide under the synonym.

GENUS: Pseudofortuynia GENOME: Pseudofortuynia esfandiarii

SPECIES: <u>esfandiarii</u> Hedge

AUTH SOURCE: Rech. f., Fl. Iranica 57:57 (1968)

Information is available in the Guide under this name.

**GENUS: GENOME:** Psychine stylosa

**Psychine** SPECIES: stylosa Desf.

AUTH SOURCE: Fl. Atlant. 2:69 (1798)

Information is available in the Guide under this name.

GENUS: Quezeliantha GENOME: Quezeliantha tibestica

SPECIES: tibestica (H. Scholz) H. Scholz
AUTH SOURCE: Taxon 31:558 (1982)

Information is available in the Guide under this name.

GENOME: Raffenaldia platycarpa GENUS: Raffenaldia

SPECIES: platycarpa (Coss.) Stapf
AUTH SOURCE: Bot. Mag. : Tab 9267 (1932)

Information is available in the Guide under this name.

GENUS: GENOME: Raffenaldia primuloides Raffenaldia

SPECIES: primuloides Godr.

AUTH SOURCE: Flor. Juvenal 1:5 (1853), Mém. Acad. Sci. Montpellier, Sect méd. 1:413 (1853) Information is available in the Guide under this name.

GENUS: GENOME: Sinapis aucheri Raphanus

SPECIES: aucheri Boiss.

AUTH SOURCE: Diagn. Pl. Orient. Nov. ser. 1, 8:45 (1849) Sinapis aucheri (Boiss.) O.E. Schulz SYNONYM: Information is available in the Guide under the synonym.

GENUS: Raphanus GENOME: Raphanus

SPECIES: caudatus L

AUTH SOURCE: Mantissa I.:95 (1767)

SYNONYM: Raphanus sativus L.
Information is available in the Guide under the synonym.

GENUS: **GENOME:** Raphanus Raphanus

SPECIES: landra Moretti ex DC.

AUTH SOURCE: Reg. Veg. Syst. Nat. 2:668 (1821)

Raphanus raphanistrum ssp. landra (Moretti ex DC.) Bonnier & Layens SYNONYM:

Information is available in the Guide under the synonym.

GENUS: **GENOME:** Raphanus Raphanus

SPECIES: maritimus Sm.

AUTH SOURCE: Sowerby, Engl. Bot.: tab 1643 (1806)

SYNONYH: Raphanus raphanistrum ssp. maritimus (Sm.) Thell. Information is available in the Guide under the synonym.

**GENOME: Raphanus** GENUS: Raphanus microcarpus (Lange) Willk. SPECIES: AUTH SOURCE: Willk. & Lange, Prodr. Fl. Hispan. 3, 4:750 (1880) Raphanus raphanistrum ssp. microcarpus (Lange) Thell. Information is available in the Guide under the synonym. **GENOME:** Raphanus **GENUS:** Raphanus SPECIES: raphanistrum L AUTH SOURCE: Sp. Pl. :669 (1753) ssp. <u>landra</u> (Moretti ex DC.) Bonnier & Layens, Tabl. Syn. Pl. Vasc. Fl. France :21 (1894); ssp. <u>maritimus</u> (Sm.) Thell.: Hegi, Ill. Fl. Mitt.-Eur. 4:278 (1918); ssp. <u>microcarpus</u> (Lange) Thell.: Hegi, Ill. Fl. Mitt.-Eur. 4:275 (1918); SUBSPECIES: ssp. raphanistrum ssp. rostratus (DC.) Thell.: Hegi, Ill. Fl. Mitt.-Eur. 4:279 (1918) Information is available in the Guide under this name. GENUS: Raphanus **GENOME: Raphanus** SPECIES: rostratus DC. AUTH SOURCE: Reg. Veg. Syst. Nat. 2:666 (1821) Raphanus raphanistrum ssp. rostratus (DC.) Thell. SYNONYM: Information is available in the Guide under the synonym. GENUS: Raphanus **GENOME: Raphanus** SPECIES: sativus L AUTH SOURCE: Sp. Pl. :669 (1753) Information is available in the Guide under this name. GENUS: Rapistrella GENOME: Rapistrella ramosissima SPECIES: ramosissima Pomel AUTH SOURCE: Mat. Fl. Atlant. :11 (1860) Hybrid between Rapistrum rugosum (L.) All.  $\underline{x}$  Cordylocarpus muricatus Desf. SYNONYM: Information is available in the Guide under this name. GENUS: Rapistrum GENOME: Rapistrum rugosum SPECIES: hispanicum (L.) Crantz AUTH SOURCE: Class Crucif. Emend.: 106 (1769) Rapistrum rugosum ssp. linnaeanum Rouy & Foucaud SYNONYM: Information is available in the Guide under the synonym. GENUS: Rapistrum GENOME: Rapistrum rugosum SPECIES: linnaeanum Boiss. & Reut. [nom. illeg.] SYNONYN: Rapistrum rugosum ssp. Linnaeanum Rouy & Foucaud Information is available in the Guide under the synonym. GENUS: Rapistrum GENOME: Rapistrum rugosum SPECIES: <u>Orientale</u> (L.) Crantz AUTH SOURCE: Class. Crucif. Emend. :106 (1769) Rapistrum rugosum Information is available in the Guide under the synonym. GENUS: Rapistrum GENOME: Rapistrum perenne SPECIES: perenne (L.) All.
AUTH SOURCE: Fl. Pedem. 1:258 (1785) Information is available in the Guide under this name. GENUS: GENOME: Rapistrum rugosum Rapistrum SPECIES: rugosum (L.) All.
AUTH SOURCE: Fl. Pedem. 1:257 (1785) ssp. Linnaeanum Rouy & Foucaud, Fl. France 2:73 (1895); SUBSPECIES: ssp. <u>rugosum</u> Information is available in the Guide under this name. Reboudia GENOME: Erucaria erucarioides SPECIES: <u>erucarioides</u> Coss. & Durieu AUTH SOURCE: Bull. Soc. Bot. Fr. 3:705 (1856) Erucaria erucarioides (Coss. & Durieu) C. Mueller Information is available in the Guide under the synonym.

GENUS: GENOME: Erucaria microcarpa Reboudia

pinnata (Viv.) O.E. Schulz SPECIES: AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916) SYNONYH: Erucaria microcarpa Boiss. Information is available in the Guide under the synonym.

GENUS: Rhynchosinapis GENOME: Coincya

AUTH SOURCE: Hayek

SYNONYM: Coincya Porta & Rigo ex Rouy
Information is available in the Guide under the synonym.

Rytidocarpus **GENOME:** Rytidocarpus moricandioides

moricandioides Coss. SPECIES:

AUTH SOURCE: Coss. & Barratte, Illustr. Fl. Atlant. 1:100 (1889)

Information is available in the Guide under this name.

GENOME: Savignya parviflora GENUS: Savignya

aegyptiaca DC. SPECIES-

AUTH SOURCE: Reg. Veg. Syst. Nat. 2:283 (1821) [nom. illeg.]

Savignya parviflora (Del.) Webb

Information is available in the Guide under the synonym.

GENUS: Savignya GENOME: Savignya parviflora

SPECIFS: longistyla Boiss. & Reut.

AUTH SOURCE: Boiss., Diagn. Pl. Orient. Nov. ser. 2, 5:27 (1856)
SYNONYM: Savignya parviflora ssp. Longistyla (Boiss. & Reut.) Maire

Information is available in the Guide under the synonym.

**GENUS:** GENOME: Savignya parviflora Savignya

SPECIES: parviflora (Del.) Webb

AUTH SOURCE: Parl., Giorn. Bot. It. 2:215 (1847)

SUBSPECIES: ssp. globosa Jafri, Ali & Jafri, Fl. Libya 23:85 (1977);

ssp. Longistyla (Boiss. & Reut.) Maire, Bull. Soc. Hist. Nat. Afr. Nord 20:172 (1929);

ssp. parviflora

Information is available in the Guide under this name.

GENUS: GENOME: Schouwia purpurea Schouwia

arabica DC. SPECIES:

AUTH SOURCE: Reg. Veg. Syst. Nat. 2:644 (1821) [nom. illeg.]

Schouwia purpurea (Forssk.) Schweinf. SYNONYH:

Information is available in the Guide under the synonym.

GENOME: Schouwia purpurea **GENUS:** 

Schouwia SPECIES: purpurea (Forssk.) Schweinf.

AUTH SOURCE: Bull. Herb. Boissier 4, App. 2:183 (1896)

SUBSPECIES:

ssp. <u>purpurea</u>; ssp. schimperi (Jaub. & Spach) Maire, Mém. Soc. Hist. Nat. Afr. Nord 3:111 (1933)

Information is available in the Guide under this name.

GENUS: GENOME: Schouwia purpurea Schouwia

schimperi Jaub. & Spach SPECIES:

AUTH SOURCE: Illustr. Pl. Orient. 3:145 (1847)

Schouwia purpurea ssp. schimperi (Jaub. & Spach) Maire

Information is available in the Guide under the synonym.

GENUS: Schouwia GENOME: Schouwia purpurea

SPECIES: thebaica Webb

AUTH SOURCE: Parl., Giorn. Bot. Ital. 2:219 (1847)

Schouwia purpurea ssp. schimperi (Jaub. & Spach) Maire SYNONYM:

Information is available in the Guide under the synonym.

GENUS: GENOME: Sinapidendron <u>Sinapidendron</u>

SPECIES: angustifolium (DC.) Lowe

AUTH SOURCE: Man. Fl. Madrid 1:30 (1857-1868)

Information is available in the Guide under this name.

GENUS: Sinapidendron GENOME: Sinapidendron

bourgaei Webb ex Christ SPECIES:

AUTH SOURCE: Engler Bot. Jahrb. IX:89 (1887)

GENOME: Sinapidendron Sinapidendron frutescens (Aiton) Lowe AUTH SOURCE: Trans. Camb. Phil. Soc. 4:37 (1831) Information is available in the Guide under this name. GENOME: Diplotaxis harra Sinapidendron SPECIES: gracile Webb AUTH SOURCE: Hook, Icon. Pl. New ser. IV: t. 751 (1848) Diplotaxis gracilis (Webb) O.E. Schulz SYNONYM: Information is available in the Guide under the synonym. GENOME: Diplotaxis harra **GENUS:** Sinapidendron SPECIES: <u>hirtum</u> Cheval AUTH SOURCE: Bull. Mus. Hist. Nat., Paris, Ser. 2, 7:141 (1935)
SYNONYM: Diplotaxis harra ssp. hirta (Cheval) Sobrino Information is available in the Guide under the synonym. GENOME: Sinapidendron Sinapidendron palmense (Kuntze) O.E. Schulz SPECIES: AUTH SOURCE: Engler, Pflanzenr. IV 105 (Heft 68-70):87 (1919) Information is available in the Guide under this name. GENUS: GENOME: Sinapidendron <u>Sinapidendron</u> SPECIES: rupestre Lowe AUTH SOURCE: Trans. Camb. Phil. Soc. 4:37 (1831) Information is available in the Guide under this name. GENUS. GENOME: Diplotaxis harra <u>Sinapidendron</u> SPECIES: vogelii Webb AUTH SOURCE: Hook., Icon. Pl. New. ser. IV: t. 152 (1848) Diplotaxis voqelii (Webb) O.E. Schulz SYNONYH: Information is available in the Guide under the synonym. GENUS: GENOME: Sinapis alba-flexuosa Sinapis SPECIFS: alba L. AUTH SOURCE: Sp. Pl. :668 (1753) SUBSPECIES: ssp. alba; ssp. dissecta (Lag.) Bonnier, Fl. Compl. France 1:58 (1912); ssp. mairei (H. Lindb.) Maire, Bull. Soc. Hist. Nat. Afr. Nord 24:198 (1933) SYNONYH: Brassica hirta Moench Information is available in the Guide under this name. GENOME: Sinapis arvensis <u>Sinapis</u> SPECIES: allioni Jacq. AUTH SOURCE: Hort. Bot. Vindob. 2: 79, t. 168 (1772-1773)
SYNONYM: Sinapis arvensis ssp. allioni (Jacq.) Baillarg. Information is available in the Guide under the synonym. GENUS: <u>Sinapis</u> **GENOME:** Sinapis pubescens SPECIES: aristidis Pomel
AUTH SOURCE: Nouv. Mat. Fl. Atlant. 2: 358 (1875) SYNONYH: Sinapis pubescens ssp. aristidis (Pomel) Maire & Weiller Information is available in the Guide under the synonym. GENUS: GENOME: Sinapis arvensis Sinapis SPECIES: arvensis L AUTH SOURCE: Sp. Pl. :668 (1753) ssp. allionii (Jacq.) Baillarg., Willdenowia 15:69 (1985); SUBSPECIES: ssp. arvensis; ssp. nilotica (O.E. Schulz) Baillarg., [Ph.D. thesis 1986] Information is available in the Guide under this name. GENUS: <u>Sinapis</u> GENOME: Sinapis aucheri SPECIES: aucheri (Boiss.) O.E. Schulz AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):56 (1916) Brassica aucheri Boiss., Ann. Sci. Nat. Bot., Ser. 2, 17:88 (1842);
Raphanus aucheri (Boiss.) Boiss., Diagn. Pl. Orient. Nov. ser. 1, 8:45 (1849)

GENOME: Sinapis pubescens GENUS: Sinapis

boivinii Baillarg. SPECIES: AUTH SOURCE: Ph.D. thesis 1986 SYNONYH: Sinapis pubescens L.

Information is available in the Guide under the synonym.

Sinapis

GENUS:

SPECIES: dissecta Lag.
AUTH SOURCE: Gen. Sp. Pl. :20 (1816)

<u>Sinapis</u> <u>alba</u> ssp. <u>dissecta</u> (Lag.) Bonnier Information is available in the Guide under the synonym.

GENOME: Sinapis alba-flexuosa GENUS: <u>Sinapis</u>

SPECIES: flexuosa Poir.

AUTH SOURCE: Lam., Encycl. Méth. Bot. 4:341 (1797) Information is available in the Guide under this name.

GENOME: Sinapis pubescens GENUS: Sinapis

SPECIES: indurata Coss.

AUTH SOURCE: Bull. Soc. Bot. Fr. 9:168 (1862)

SYNONYM: Sinapis pubescens ssp. indurata (Coss.) Batt. Information is available in the Guide under the synonym.

GENUS: GENOME: Sinapis alba-flexuosa **Sinapis** 

SPECIES: mairei H. Lindb.

AUTH SOURCE: Acta Soc. Sci. Fenn. Ser. B Opera. Biol. 1:65 (1932)
SYNONYM: Sinapis alba ssp. mairei (H. Lindb.) Maire Information is available in the Guide under the synonym.

GENUS: Sinapis GENOME: Sinapis pubescens

SPECIES: pubescens L

AUTH SOURCE: Mantissa 1:95 (1767)

ssp. <u>aristidis</u> (Pomel) Maire & Weiller: Maire, Fl. Afr. Nord 12:240 (1965); ssp. <u>"boivinii"</u> [= <u>Sinapis</u> <u>boivinii</u>]; SUBSPECIES:

ssp. indurata (Coss.) Batt.: Batt. & Trabut, Fl. Algérie 1:53 (1888);

GENOME: Sinapis alba-flexuosa

ssp. <u>pubescens</u>;

ssp. virgata (Batt.) Baillarg., [Ph.D. thesis 1986]

Information is available in the Guide under this name.

<u>Sinapis</u> <u>turgida</u> (Pers.) Del. GENUS: **GENOME:** Sinapis arvensis

SPECIES:

AUTH SOURCE: Mém. Bot. Desc. Egypt 4:19 (1813)

SYNONYH: <u>Sinapis arvensis</u> ssp. <u>allionii</u> (Jacq.) Baillarg. Information is available in the Guide under the synonym.

GENUS: GENOME: Succovia balearica Succowia

SPECIES: balearica (L.) Medik.
AUTH SOURCE: Pflanzengatt.:65 (1792)

Information is available in the Guide under this name.

GENUS: **GENOME:** Trachycnemum mirabile Trachycnemum

SPECIES: mirabile Maire & Sam.

AUTH SOURCE: Arkiv f. Bot. 29A, 11:9 (1939)

Hybrid between Trachystoma ballii O.E. Schulz x Ceratocnemum rapistroides Coss. & Bal. SYNONYM:

Information is available in the Guide under this name.

GENUS: GENOME: Trachystoma aphanoneurum-ballii Trachystoma

SPECIES: aphanoneurum (Maire & Weiller) Maire & Weiller AUTH SOURCE: Bull. Soc. Hist. Nat. Afr. Nord 25:289 (1934) Information is available in the Guide under this name.

GENUS: GENOME: Trachystoma aphanoneurum-ballii Trachystoma

SPECIES: ballii O.E. Schulz

AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):52 (1916) Information is available in the Guide under this name.

GENUS: Trachystoma GENOME: Trachystoma labasii

SPECIES: <u>labasii</u> Maire

AUTH SOURCE: Mém. Soc. Sci. Nat. Maroc 15:6 (1927) Information is available in the Guide under this name.

**Vella** GENOME: Carrichtera annua SPECIES: annua L. AUTH SOURCE: Sp. Pl.: 641 (1753) SYNONYM: Carrichtera annua (L.) DC.
Information is available in the Guide under the synonym. GENUS: Vella **GENOME:** Vella anremerica SPECIES: anremerica (Litard. & Maire) Gómez-Campo Bot. J. Linn. Soc. 82:175 (1981) AUTH SOURCE: Vella pseudocytisus ssp. anremerica Litard. & Maire, Mém. Soc. Sci. Nat. Maroc. 26:6 (1931) SYNONYM: Information is available in the Guide under this name. GENUS: Vella GENOME: Vella anremerica charpinii Fernández-Casas SPECIES: AUTH SOURCE: Fontqueria 1:9 (1982) Vella anremerica (Lit. & Maire) Gómez-Campo SYNONYH: Information is available in the Guide under the synonym. GENUS: Vella **GENOME:** Vella pseudocytisus SPECIES: glabrescens Coss. AUTH SOURCE: Coss. & Barratte, Illust. Fl. Atlant. 1:71 (1884) SYNONYM: Vella pseudocytisus ssp. qlabrata (Coss.) Greuter Information is available in the Guide under the synonym. **GFNUS:** <u>Vella</u> **GENOME:** Vella lucentina SPECIES: lucentina M. B. Crespo AUTH SOURCE: Bot. J. Linn. Soc. 109:370 (1992) Information is available in the Guide under this name. Vella GENOME: Vella mairei SPECIES: mairei Humbert AUTH SOURCE: Bull. Soc. Hist. Nat. Afr. Nord 15:186 (1924) Information is available in the Guide under this name. GENUS: **Vella GENOME:** Vella pseudocytisus SPECIES: pseudocytisus L AUTH SOURCE: Sp. Pl.:641 (1753) SUBSPECIES: ssp. glabrata (Coss.) Greuter: Greuter et al., Med.-Checklist 3 (1986); ssp. paui Gómez-Campo, Bot. J. Linn. Soc. 82:174 (1981); ssp. pseudocytisus
Information is available in the Guide under this name. GENUS: **Vella** GENOME: Vella spinosa SPECIES: spinosa Boiss.

AUTH SOURCE: Biblioth. Univ. Genève ser. 2, 13:407 (1838) Information is available in the Guide under this name. GENUS: GENOME: Zilla spinosa Zilla SPECIES: biparmata O.E. Schulz AUTH SOURCE: Engler, Bot. Jahrb. 54 (Beibl. 119):55 (1916) Zilla spinosa ssp. biparmata (O.E. Schulz) Maire & Weiller Information is available in the Guide under the synonym. GENUS: Zilla GENOME: Zilla spinosa SPECIES: macroptera Coss. AUTH SOURCE: Bull. Soc. Bot. Fr. 3:670 (1856) SYNONYM: Zilla spinosa ssp. macroptera (Coss.) Maire & Weiller Information is available in the Guide under the synonym. GENUS: Zilla GENOME: Zilla spinosa SPECIES: spinosa (L.) Prantl AUTH SOURCE: Engler & Prantl Nat. Pflanzenr. 3,2:174 (1891) ssp. biparmata (O.E. Schulz) Maire & Weiller, Bull. Soc. Hist. Nat. Afr. Nord 30:260 SUBSPECIES: (1939): ssp. costata Maire & Weiller, Bull. Soc. Hist. Nat. Afr. Nord 30:260 (1939); ssp. macroptera (Coss.) Maire & Weiller: Maire, Fl. Afr. Nord 13:8 (1967); ssp. myagroides (Forssk.) Maire & Weiller, Bull. Soc. Hist. Nat. Afr. Nord 30:260 (1939); ssp. spinosa

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